

LBT-A57CD/A57CDM/A67CD/A67CDM /D509CD/D559CD/D609CD

SERVICE MANUAL

REVISED

Discard your LBT-A57CD/A57CDM/A67CD/
A67CDM/D509CD/D559CD/D609CD service manual
previously issued.

This service manual contain it.

AEP Model
LBT-D509CD/D609CD

UK Model
LBT-D559CD

E Model
LBT-A57CD/A57CDM/A67CD/A67CDM
Australian Model
LBT-A57CDM/A67CDM

These systems are composed of following models.
As for the service manual, it is issued for each
component model, then, please refer to it.

COMPONENT MODEL NAME FOR LBT-A57CD/ A57CDM/D509CD/D559CD

System Component	LBT-A57CD	LBT-A57CDM	LBT-D509CD	LBT-D559CD
Tuner	ST-D709		ST-D709	
Amplifier	TA-A57		TA-D509	
Cassette deck	TC-D509		TC-D509	TC-D609
Record player	—		—	PS-LX47P
CD player	CDP-M43	CDP-C422M	CDP-M43 or CDP-C422M	CDP-C422M

COMPONENT MODEL NAME FOR LBT-A67CD/ A67CDM/D609CD

System Component	LBT-A67CD	LBT-A67CDM	LBT-D609CD
Tuner	ST-D709		
Amplifier	TA-A67		TA-D609
Cassette deck	TC-D709		
CD player	CDP-M43	CDP-C422M	CDP-M43 or CDP-C422M

STEREO COMPONENT SYSTEM
SONY®

PARTS LIST

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Abbreviations
G : German AUS : Australian
IT : Italian EA : Saudi Arabia
EE : East European MY : Malaysia
SP : Singapore

LBT-A57CD/A57CDM/D509CD/D559CD

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS *****	
	1-466-983-11	REMOTE COMMANDER (RM-S509)	
	1-501-374-11	ANTENNA, LOOP	
	1-501-594-11	ANTENNA (FM) (AEP, EE, IT)	
	1-559-533-11	CORD, CONNECTION (UK, E, AUS, EA, MY, SP)	
	1-574-314-11	CORD (WITH CONNECTOR) (AU BUS) (3P-3P)	
	1-590-822-11	CORD (WITH CONNECTOR) (3P-11P-11P)	
	1-590-823-11	CORD (WITH CONNECTOR) (3P-15P-15P)	
	1-690-727-11	CORD (SPEAKER) (E, AUS, EA, MY, SP)	
*	3-350-154-01	CUSHION (for TC)	
	3-754-847-11	MANUAL, INSTRUCTION (English, French, Spanish, Portuguese) (for CDP-C422M)	
	3-756-540-11	MANUAL, INSTRUCTION (English) (UK)	
	3-756-540-41	MANUAL, INSTRUCTION (English, French, Spanish, Portuguese) (AEP)	
	3-756-540-51	MANUAL, INSTRUCTION (German, Dutch, Swedish, Italian) (AEP, G, IT)	
	3-756-540-61	MANUAL, INSTRUCTION (English, German, Polish, Russian) (EE)	
	3-756-540-81	MANUAL, INSTRUCTION (English, French, Spanish, Chinese) (E, AUS, EA, MY, SP)	
	4-920-940-01	SHEET (A), PROTECTION (for ST, TC, CDP-M43)	
*	4-929-563-01	CUSHION (for ST, CDP-M43)	
*	4-934-859-01	CUSHION (for TA)	
*	4-952-208-21	INDIVIDUAL CARTON (for ST) (LBT-D509CD)	
*	4-952-745-01	CUSHION (R) (for PS)	
*	4-952-746-01	CUSHION (L) (for PS)	
*	4-958-770-01	INDIVIDUAL CARTON (for ST, TA, TC) (LBT-D509CD)	
*	4-958-771-01	INDIVIDUAL CARTON (LBT-D559CD)	
*	4-958-772-01	INDIVIDUAL CARTON (for TA, TC) (LBT-D509CD)	
*	4-958-773-01	INDIVIDUAL CARTON (LBT-A57CD)	
*	4-958-774-01	INDIVIDUAL CARTON (LBT-A57CDM)	
*	4-958-814-01	CUSHION (FRONT) (for CDP-C422M)	
*	4-958-815-01	CUSHION (REAR) (for CDP-C422M)	

LBT-A67CD/A67CDM/D609CD

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS *****	
	1-466-987-11	REMOTE COMMANDER (RM-S609)	
	1-501-374-11	ANTENNA, LOOP	
	1-501-594-11	ANTENNA (FM) (AEP, EE, IT)	
	1-559-533-11	CORD, CONNECTION (E, AUS, EA, MY, SP)	
	1-574-314-11	CORD (WITH CONNECTOR) (AU BUS) (3P-3P)	
	1-590-822-11	CORD (WITH CONNECTOR) (3P-11P-11P)	
	1-590-823-11	CORD (WITH CONNECTOR) (3P-15P-15P)	
	1-690-727-11	CORD (SPEAKER) (E, AUS, EA, MY, SP)	
*	3-350-154-01	CUSHION (for TC)	
	3-754-847-11	MANUAL, INSTRUCTION (English, French, Spanish, Portuguese) (for CDP-C422M)	
	3-756-541-41	MANUAL, INSTRUCTION (English, French, Spanish, Portuguese) (AEP)	
	3-756-541-51	MANUAL, INSTRUCTION (German, Dutch, Swedish, Italian) (AEP, G, IT)	
	3-756-541-61	MANUAL, INSTRUCTION (English, German, Polish, Russian) (EE)	
	3-756-541-71	MANUAL, INSTRUCTION (English, French, Spanish, Chinese) (E, AUS, EA, MY, SP)	
	4-920-940-01	SHEET (A), PROTECTION (for ST, TC, CDP-M43)	
*	4-929-563-01	CUSHION (for ST, CDP-M43)	
*	4-934-859-01	CUSHION (for TA)	
*	4-952-208-21	INDIVIDUAL CARTON (for ST) (LBT-D609CD)	
*	4-958-775-01	INDIVIDUAL CARTON (for ST, TA, TC) (LBT-D609CD)	
*	4-958-777-01	INDIVIDUAL CARTON (for TA, TC) (LBT-D609CD)	
*	4-958-778-01	INDIVIDUAL CARTON (LBT-A67CD)	
*	4-958-779-01	INDIVIDUAL CARTON (LBT-A67CDM)	
*	4-958-814-01	CUSHION (FRONT) (for CDP-C422M)	
*	4-958-815-01	CUSHION (REAR) (for CDP-C422M)	

TA-A57/D509

SERVICE MANUAL

AEP Model

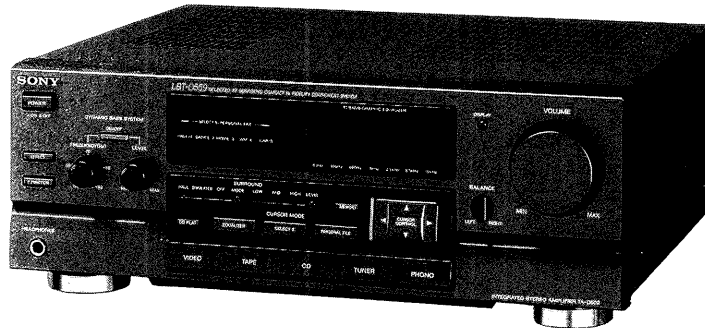
UK Model

TA-D509

E Model

Australian Model

TA-A57



This set is the Amplifier section in LBT-A57CD/A57CDM/D509CD/D559CD.

This photo is TA-D509.

SPECIFICATIONS

TA-A57

Continuous RMS power output

60 W + 60 W
(6 ohms, at 1 kHz, 5% THD)

Peak music power output 750W (4 speakers driven)

Input	Jack type	Sensitivity	Impedance
VIDEO	Phono	245 mV	47 kohms
PHONO (MM)	Phono	3.3 mV	47 kohms
MIC	Phono	1 mV	10 kohms

Audio output	Jack type	Voltage	Impedance
SURROUND SPEAKER	Phono	Accepts speakers of 16 ohms	
HEADPHONES	Stereophone	Accepts headphones of 8 ohms or more	

Frequency response 15 Hz to 50 kHz ± 0 dB

Power requirements
TYPE I
120V/220V/240V AC, adjustable with the voltage selector, 50/60Hz
TYPE II
120V/220V/230—240V AC, adjustable with the voltage selector, 50/60Hz

Power consumption 180W

Weight Approx. 5.9 kg (12 lbs 15 oz)
Dimensions Approx. 355 x 135 x 330 mm
(14 x 5 $\frac{1}{4}$ x 12 $\frac{7}{8}$ inches)
(w/h/d, including projections)

Design and specifications are subject to change without notice.

TA-D509

Continuous RMS power output

60 W + 60 W
(6 ohms, at 1 kHz, 5% THD)
50 W + 50 W (6 ohms, DIN, 1 kHz)
90 W + 90 W
(6 ohms, at 1 kHz, 10% THD)

Music power output

Input	Jack type	Sensitivity	Impedance
VIDEO	Phono	245 mV	47 kohms
PHONO (MM)	Phono	3.3 mV	47 kohms

Audio output	Jack type	Voltage	Impedance
SURROUND SPEAKER	Phono	Accepts speakers of 16 ohms	
HEADPHONES	Stereophone	Accepts headphones of 8 ohms or more	

Frequency response 15 Hz to 50 kHz ± 0 dB
Power requirements 220—230V AC, 50/60Hz
(AEP, G, IT, EE model)
240V AC, 50/60Hz (UK model)

Power consumption 150 W
Weight Approx. 5.9 kg (12 lbs 15 oz)
Dimensions Approx. 355 x 135 x 330 mm
(14 x 5 $\frac{1}{4}$ x 12 $\frac{7}{8}$ inches)
(w/h/d, including projections)

Design and specifications are subject to change without notice.

• Abbreviations

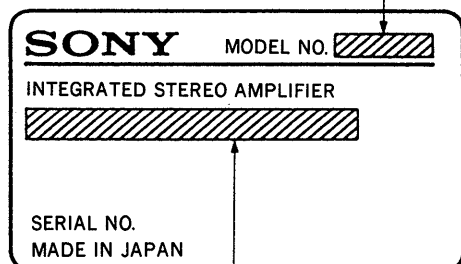
G : German model
IT : Italian model
EE : East European model

INTEGRATED STEREO AMPLIFIER
SONY®

MODEL IDENTIFICATION

—Specification Label—

E, EA, AUS, MY, SP model: TA-A57
AEP, UK, G, IT, EE model: TA-D509



AEP, IT, EE model : AC: 220V—230V~50/60Hz 150W
UK model : AC: 240V~50/60Hz
G model : SYSTEM LBT-D509
AC: 220V—230V~50/60Hz 150W
E, EA, AUS model : AC: 120V/220V/240V~50/60Hz 180W
MY, SP model : AC: 120V/220V/230V—240V~50/60Hz 180W

• Abbreviations

EA : Saudi Arabia model
AUS: Australian model
MY : Malaysia model
SP : Singapore model
G : German model
IT : Italian model
EE : East European model

SAFETY-RELATED COMPONENT WARNING!!

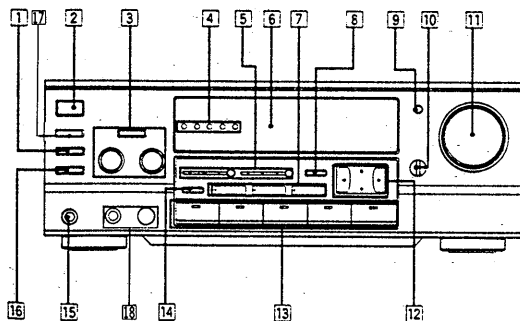
COMPONENTS IDENTIFIED BY MARK OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SECTION 1 GENERAL

1-1. LOCATION OF CONTROLS



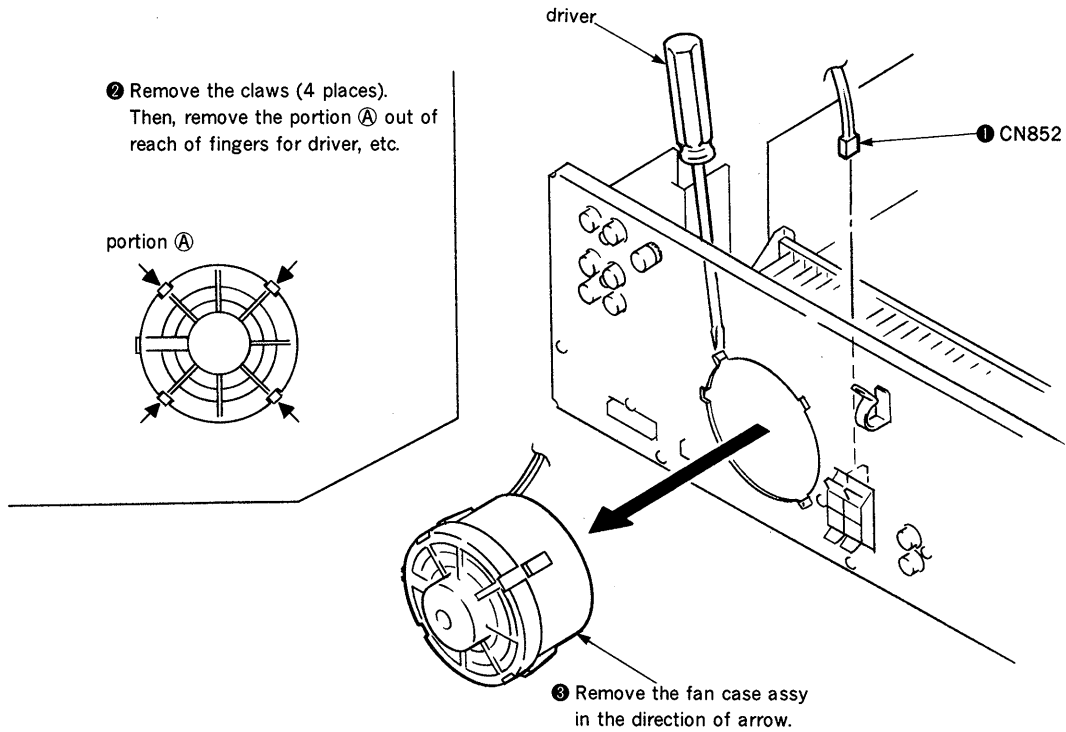
- ① EFFECT button and indicator
- ② POWER switch
- ③ DYNAMIC BASS SYSTEM controls (ON/OFF, FREQUENCY, LEVEL)
- ④ SELECT 5/PERSONAL FILE setting indicators
- ⑤ SURROUND controls (MODE, LEVEL and indicators)
- ⑥ Display window
- ⑦ CURSOR MODE buttons (EQUALIZER, SELECT 5, PERSONAL FILE and indicators)
- ⑧ MEMORY button and indicator
- ⑨ DISPLAY button
- ⑩ BALANCE control
- ⑪ VOLUME control
- ⑫ CURSOR CONTROL section
- ⑬ Function selectors and indicators
- ⑭ EQ FLAT button
- ⑮ HEADPHONES jack
- ⑯ P. FUNCTION button and indicator
- ⑰ KARAOKE P.O.N button and indicator (TA-A57 only)
- ⑱ MIC (microphone) jack and MIC LEVEL control (TA-A57 only)

This section is extracted from instruction manual.

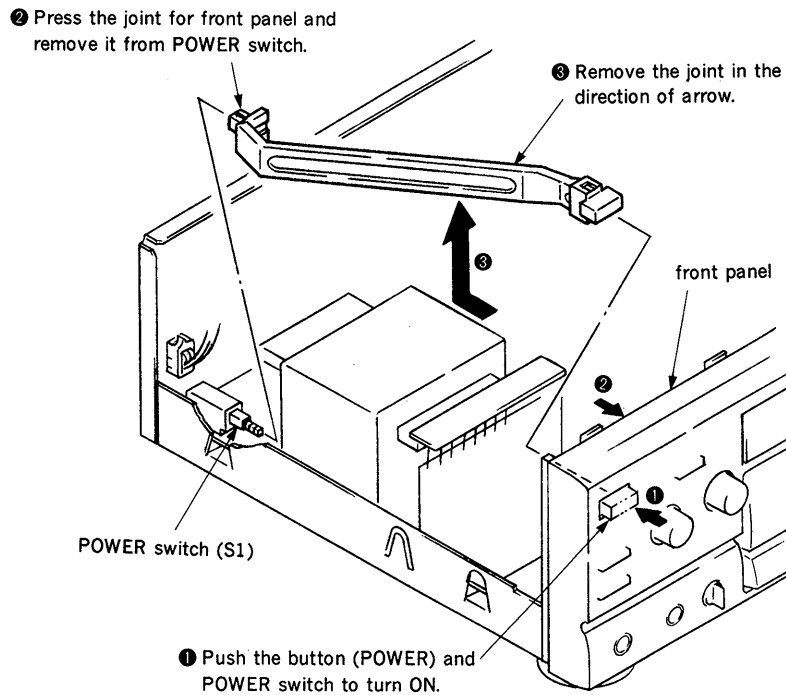
SECTION 2 SERVICE NOTES

Note : Follow the disassembly procedure in the numerical order given.

2-1. REMOVAL OF FAN CASE (TA-D509 : UK model only)

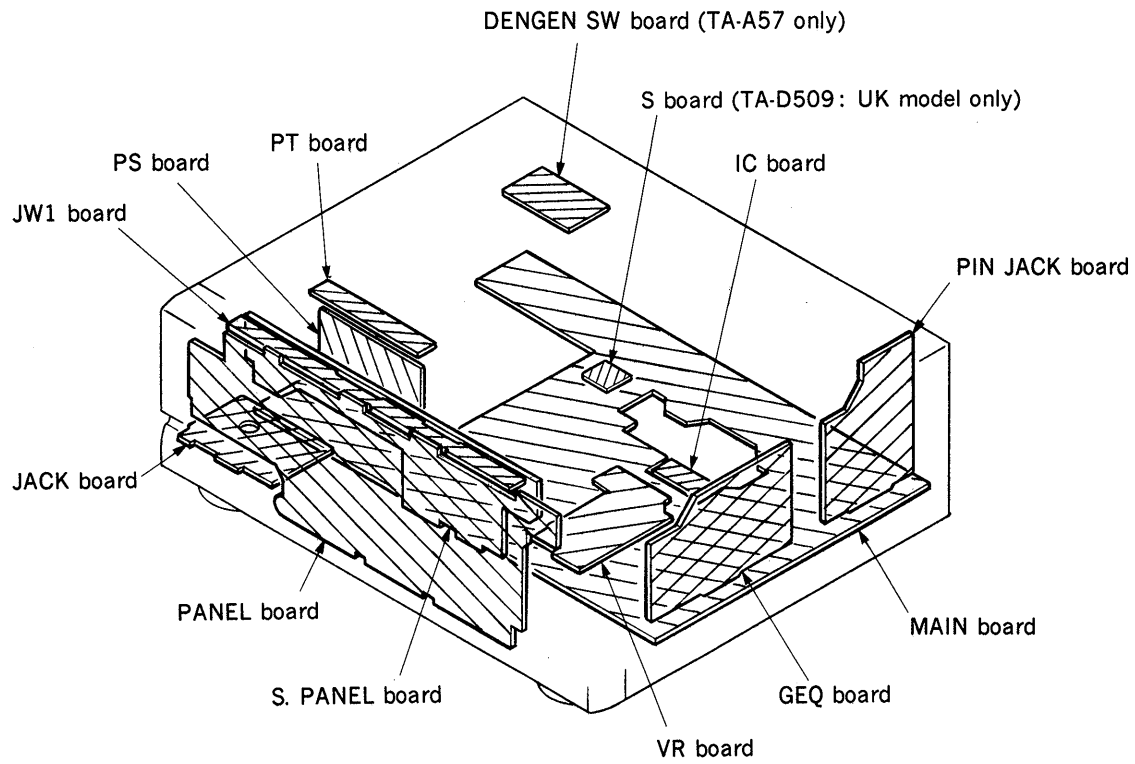


2-2. REMOVAL OF JOINT

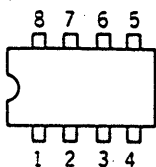
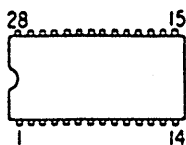


SECTION 3 DIAGRAMS

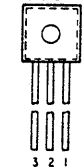
3-1. CIRCUIT BOARDS LOCATION



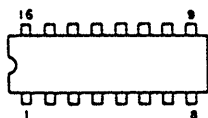
LB1639
M5218AP
μPC393C

**LC7522K**

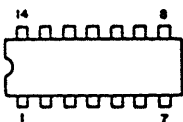
LM35DZ



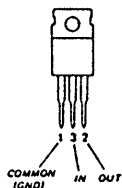
MC14052BCP
TC4094BP
XR1091DCP



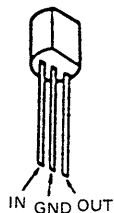
MC14066BCP



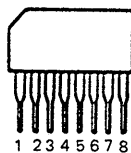
M5F79M07



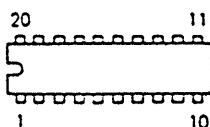
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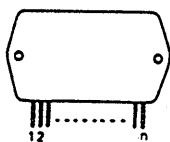
M5218AL
M5218AL-22
μPC1237HA



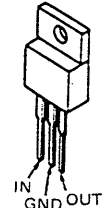
M5289P



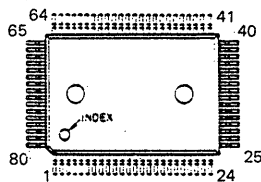
STK401-050
STK401-090



TA7807S



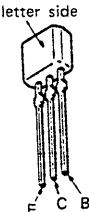
μ PD78042GF-018-3B9



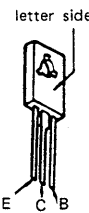
DTA114ES
DTC114ES
DTC124ES
2SC2603-EF
2SC3622A-LK



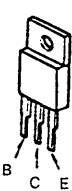
DTA124ES



2SB733-34



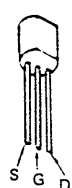
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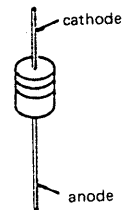
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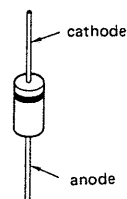
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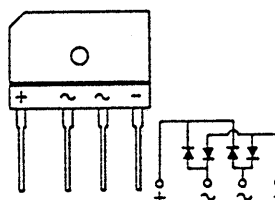
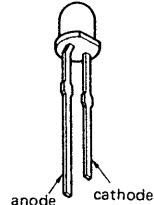
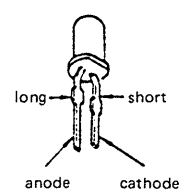
HZS30-2L
HZS7C2L
UZ-4.7BSA
UZL-6L3
UZL-6M2
UZL-7L3
11E2



UZP-6.2B
1N4148M
1S1585
10E2N



RBV-602-01

**SEL2210S****SEL3210S-CD**

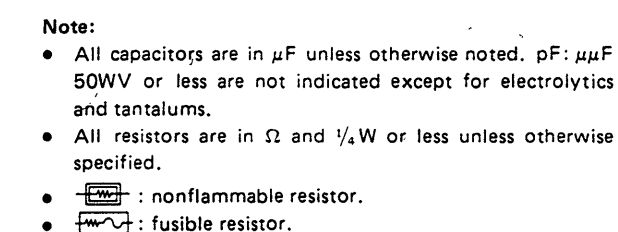
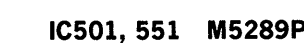
SML1860A




• Refer to page 5 for Semiconductor Lead Layouts.

— 8 —

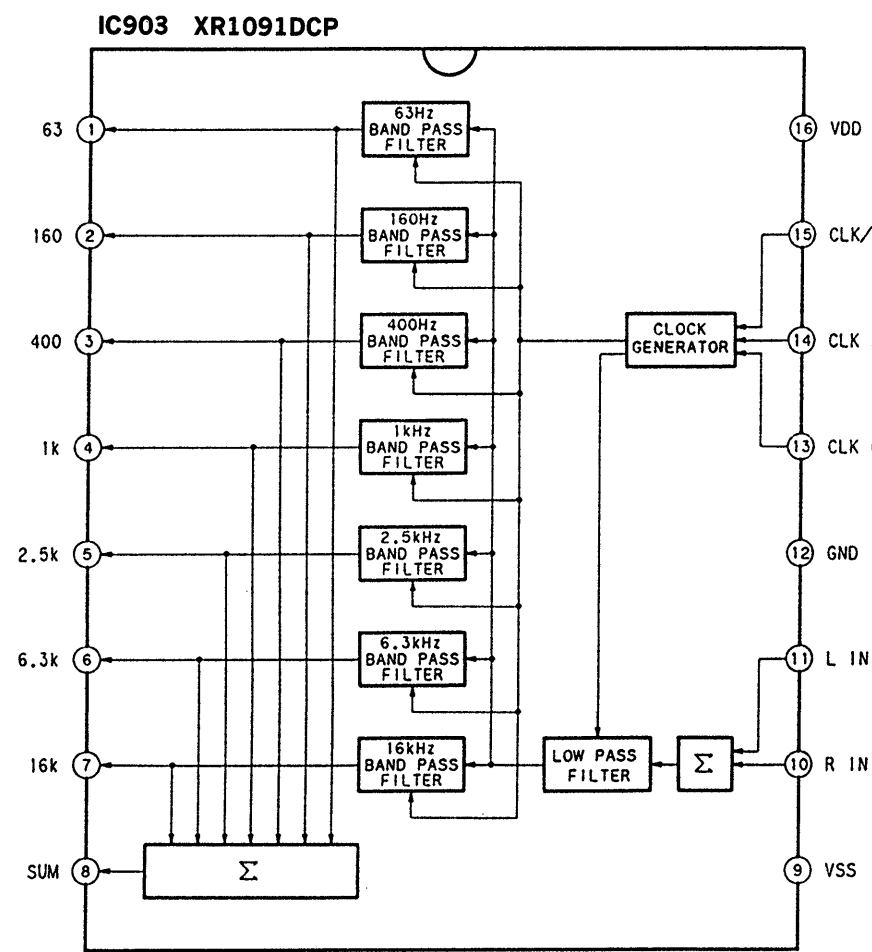
-7-



Note: The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

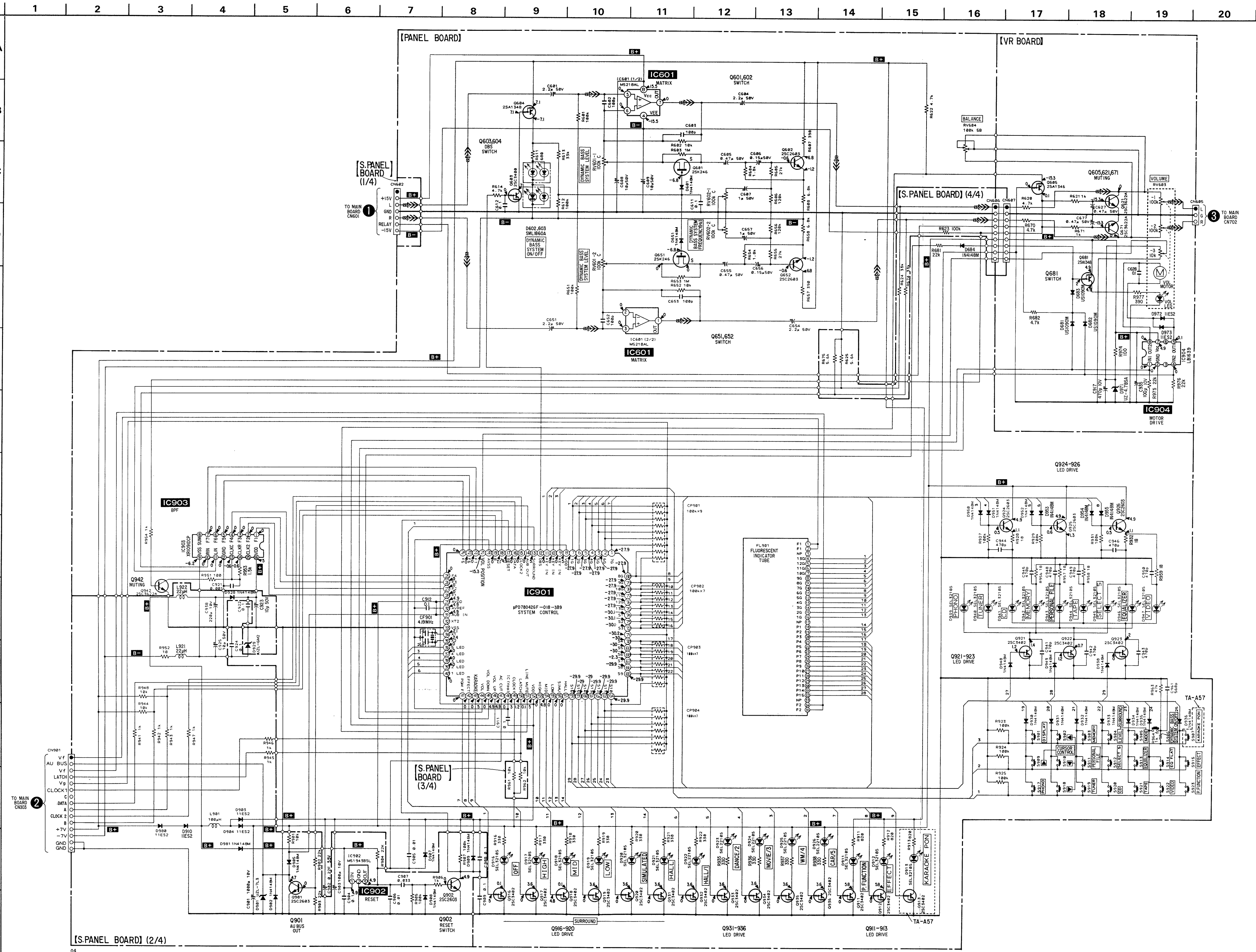
- **B+** : B+ Line
- **B-** : B- Line
- Voltage is dc with respect to ground under no-signal conditions.
no mark : PHONO
- Voltages are taken with a VOM (Input Impedance 10M Ω).
Voltage variations may be noted due to normal production tolerances.
- Signal path.
-  : PHONO
- Abbreviations
G : German model
IT : Italian model

• IC Block Diagrams



- Note:
- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $\frac{1}{2}W$ or less unless otherwise specified.
 - \triangle : internal component.
 - $B+$: B+ Line
 - $B-$: B- Line
 - Voltage is dc with respect to ground under no-signal conditions.
 - no mark: PHONO
 - Voltages are taken with a VOM (Input Impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
 - Signal path.
 - \Rightarrow : PHONO

3-5. SCHEMATIC DIAGRAM—PANEL SECTION—



SECTION 4 EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts

Example :

KNOB, BALANCE (WHITE)... (RED)

Parts Color Cabinet's Color

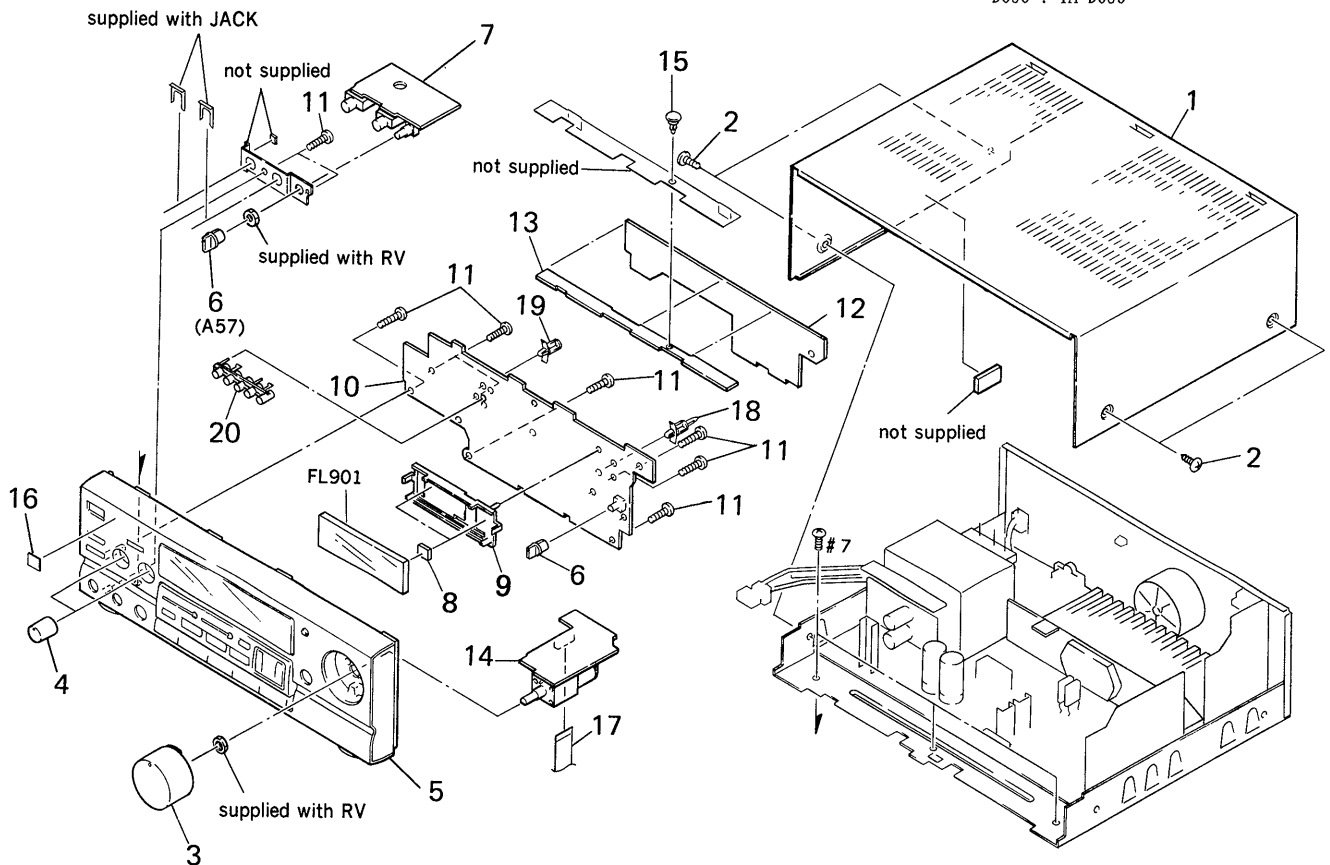
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

● Abbreviations

G : German model
IT : Italian model
EE : East European model
AUS : Australian model
EA : Saudi Arabia model
MY : Malaysia model
SP : Singapore model
A57 : TA-A57
D509 : TA-D509

4-1. FRONT PANEL SECTION

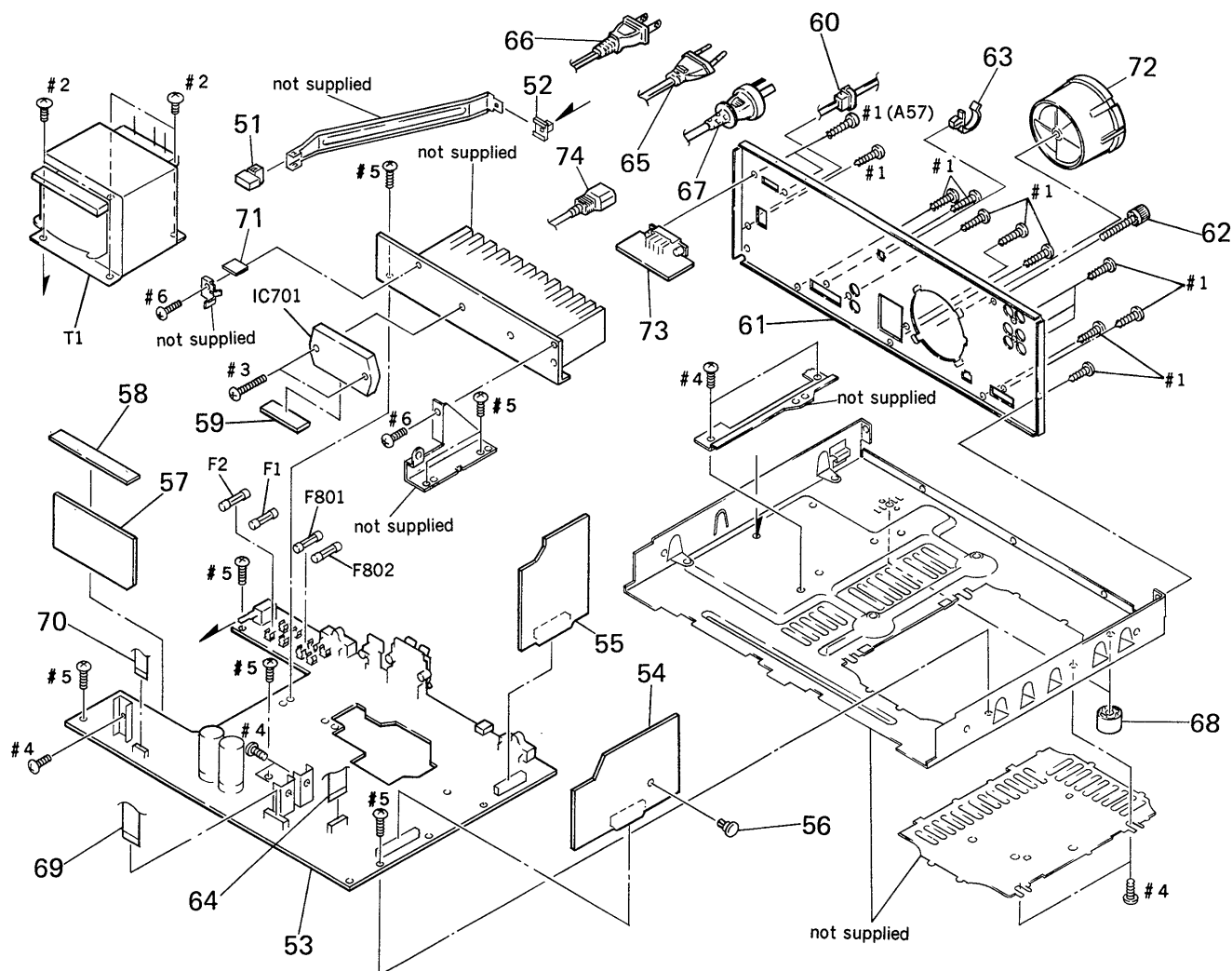


Ref. No.	Part No.	Description	Remark
1	4-949-912-31	CASE (AEP, E, G, IT, EE, AUS, EA)	
* 1	4-949-912-51	CASE (UK, MY, SP)	
2	3-363-099-01	SCREW (CASE 3 TP2)	
3	X-4943-445-1	KNOB (VOLUME) ASSY	
4	4-950-651-11	KNOB (DIA. 16), ROUND	
5	X-4943-439-1	PANEL ASSY, FRONT (AEP, G, IT, EE)	
5	X-4943-440-1	PANEL ASSY, FRONT (UK)	
5	X-4943-441-1	PANEL ASSY, FRONT (A57)	
6	4-950-652-11	KNOB (DIA. 12), ROUND	
* 7	1-647-211-11	JACK BOARD	
* 8	4-921-941-01	CUSHION (FL)	
* 9	4-923-103-01	HOLDER, FL TUBE	

Ref. No.	Part No.	Description	Remark
* 10	A-4360-075-A	PANEL BOARD, COMPLETE (D509)	
* 10	A-4360-076-A	PANEL BOARD, COMPLETE (A57)	
11	4-951-620-01	SCREW (2.6X8), +BVTP	
* 12	A-4360-078-A	S. PANEL BOARD, COMPLETE	
* 13	1-647-213-11	JW1 BOARD	
* 14	A-4360-079-A	VR BOARD, COMPLETE	
15	3-531-576-01	RIVET	
16	3-703-710-41	STICKER, SONY SYMBOL (12)	
17	1-575-905-31	WIRE, FLAT TYPE (9 CORE)	
18	4-943-687-01	HOLDER, PC BOARD	
* 19	3-350-847-21	HOLDER, PCB	
* 20	4-957-100-01	HOLDER (5 GANG), LED	
FL901	1-517-151-11	INDICATOR TUBE, FLUORESCENT	

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

4-2. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
	51	4-942-061-11 BUTTON (POWER)	
	52	4-866-342-00 JOINT (B), KNOB	
* 53	A-4360-064-A	MAIN BOARD, COMPLETE (AEP, EE)	
* 53	A-4360-065-A	MAIN BOARD, COMPLETE (G, IT)	
* 53	A-4360-066-A	MAIN BOARD, COMPLETE (UK)	
* 53	A-4360-067-A	MAIN BOARD, COMPLETE (E, AUS, EA)	
* 53	A-4360-068-A	MAIN BOARD, COMPLETE (MY, SP)	
* 54	A-4360-830-A	GEQ BOARD, COMPLETE (D509)	
* 54	A-4360-831-A	GEQ BOARD, COMPLETE (A57)	
* 55	A-4360-082-A	PIN JACK BOARD, COMPLETE (D509)	
* 55	A-4360-083-A	PIN JACK BOARD, COMPLETE (A57)	
	56	3-531-576-21 RIVET	
* 57	1-647-203-11	PS BOARD	
* 58	1-647-204-11	PT BOARD	
* 59	1-647-207-11	IC BOARD	
* 60	3-703-244-00	BUSHING (2104), CORD (AUS, EA, MY, SP, D509)	
* 60	3-703-571-11	BUSHING (S) (4516), CORD (E)	
* 61	4-957-102-11	PANEL (B3120), BACK (AEP, IT, EE)	
* 61	4-957-102-21	PANEL (B3120), BACK (UK)	
* 61	4-957-102-31	PANEL (B3120), BACK (G)	
* 61	4-957-102-41	PANEL (B3120), BACK (E, AUS, EA)	
* 61	4-957-102-51	PANEL (B3120), BACK (MY, SP)	

Ref. No.	Part No.	Description	Remark
	62	4-947-010-01 SCREW, FEEDER FIXED	
* 63	4-949-235-01	HOK	
64	1-690-114-31	WIRE, FLAT TYPE (7 CORE)	
Δ 65	1-575-654-11	CORD, POWER (AEP, G, IT, EE, EA, MY, SP)	
Δ 66	1-575-656-11	CORD, POWER (E)	
Δ 67	1-690-608-11	CORD, POWER (AUS)	
68	4-931-169-01	FOOT	
69	1-690-094-11	WIRE, FLAT TYPE (15 CORE)	
70	1-690-992-11	WIRE, FLAT TYPE (7 CORE) (A57)	
* 71	1-647-205-11	S BOARD (UK)	
72	X-4942-029-1	CASE ASSY, FAN (UK)	
* 73	1-647-206-11	DENGEN SW BOARD (A57)	
Δ 74	1-575-669-21	CORD, POWER (UK)	
Δ F1	1-532-259-00	FUSE, TIME-LAG (T1. 6A)	
Δ F2	1-532-259-00	FUSE, TIME-LAG (T1. 6A)	
Δ F801	1-532-203-00	FUSE, TIME-LAG (T2A)	
Δ F802	1-532-203-00	FUSE, TIME-LAG (T2A)	
IC701	8-749-922-91	IC STK401-050 (D509)	
IC701	8-749-922-95	IC STK401-090 (A57)	
Δ T1	1-423-527-11	TRANSFORMER, POWER (D509)	
Δ T1	1-423-528-11	TRANSFORMER, POWER (E, AUS, EA, MY)	
Δ T1	1-423-602-11	TRANSFORMER, POWER (SP)	

SECTION 5 ELECTRICAL PARTS LIST

DENGEN SW

GEQ

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA.: μ A. uPA.: μ PA.
uPB.: μ PB. uPC.: μ PC. uPD.: μ PD..
- CAPACITORS
uF: μ F
- COILS
uH: μ H

The components identified by mark Δ or dotted line with mark. Δ are critical for safety. Replace only with part number specified.

- Abbreviations
G : German model
IT : Italian model
EE : East European model
AUS : Australian model
EA : Saudi Arabia model
MY : Malaysia model
SP : Singapore model
A57 : TA-A57
D509 : TA-D509

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
*	1-647-206-11	DENGEN SW BOARD (A57) *****	
		< CONNECTOR >	
* CN3	1-573-565-11	PIN, CONNECTOR 5P (A57) < SWITCH >	
Δ VS1	1-572-009-11	SELECTOR, VOLTAGE (VOLTAGE SELECTOR) (A57) *****	
*	A-4360-830-A	GEQ BOARD, COMPLETE (D509)	
*	A-4360-831-A	GEQ BOARD, COMPLETE (A57) *****	
		< CAPACITOR >	
C505	1-162-286-31	CERAMIC 220PF 10% 50V	
C506	1-126-163-11	ELECT 4.7uF 20% 50V	
C507	1-136-177-00	FILM 1uF 5% 50V	
C508	1-136-163-00	FILM 0.068uF 5% 50V	
C509	1-136-173-00	FILM 0.47uF 5% 50V	
C510	1-136-158-00	FILM 0.027uF 5% 50V	
C511	1-130-479-00	MYLAR 0.0047uF 5% 50V	
C512	1-110-340-11	MYLAR 270PF 5% 50V	
C513	1-130-484-00	MYLAR 0.012uF 5% 50V	
C514	1-130-469-00	MYLAR 680PF 5% 50V	
C515	1-136-159-00	FILM 0.033uF 5% 50V	
C516	1-130-474-00	MYLAR 0.0018uF 5% 50V	
C517	1-136-163-00	FILM 0.068uF 5% 50V	
C518	1-130-478-00	MYLAR 0.0039uF 5% 50V	
C519	1-136-168-00	FILM 0.18uF 5% 50V	
C520	1-136-153-00	FILM 0.01uF 5% 50V	
C521	1-124-034-51	ELECT 33uF 20% 16V	
C523	1-162-282-31	CERAMIC 100PF 10% 50V	
C524	1-162-282-31	CERAMIC 100PF 10% 50V	
C525	1-126-163-11	ELECT 4.7uF 20% 50V	
C526	1-164-159-11	CERAMIC 0.1uF 50V	
C527	1-124-034-51	ELECT 33uF 20% 16V	
C528	1-136-169-00	FILM 0.22uF 5% 50V (A57)	

Ref. No.	Part No.	Description	Remark
C529	1-164-159-11	CERAMIC 0.1uF 50V	
C530	1-164-159-11	CERAMIC 0.1uF 50V	
C531	1-126-163-11	ELECT 4.7uF 20% 50V (A57)	
C532	1-124-034-51	ELECT 33uF 20% 16V	
C533	1-124-034-51	ELECT 33uF 20% 16V	
C534	1-162-219-31	CERAMIC 68PF 5% 50V (A57)	
C535	1-130-471-00	MYLAR 0.001uF 5% 50V (A57)	
C555	1-162-286-31	CERAMIC 220PF 10% 50V	
C556	1-126-163-11	ELECT 4.7uF 20% 50V	
C557	1-136-173-00	FILM 0.47uF 5% 50V	
C558	1-136-158-00	FILM 0.027uF 5% 50V	
C559	1-136-177-00	FILM 1uF 5% 50V	
C560	1-136-163-00	FILM 0.068uF 5% 50V	
C561	1-130-484-00	MYLAR 0.012uF 5% 50V	
C562	1-130-469-00	MYLAR 680PF 5% 50V	
C563	1-130-479-00	MYLAR 0.0047uF 5% 50V	
C564	1-110-340-11	MYLAR 270PF 5% 50V	
C565	1-136-159-00	FILM 0.033uF 5% 50V	
C566	1-130-474-00	MYLAR 0.0018uF 5% 50V	
C567	1-136-163-00	FILM 0.068uF 5% 50V	
C568	1-130-478-00	MYLAR 0.0039uF 5% 50V	
C569	1-136-168-00	FILM 0.18uF 5% 50V	
C570	1-136-153-00	FILM 0.01uF 5% 50V	
C571	1-124-034-51	ELECT 33uF 20% 16V	
C575	1-126-163-11	ELECT 4.7uF 20% 50V	
C578	1-136-169-00	FILM 0.22uF 5% 50V (A57)	
C579	1-164-159-11	CERAMIC 0.1uF 50V	
C580	1-164-159-11	CERAMIC 0.1uF 50V	
		< CONNECTOR >	
CN102	1-691-185-11	CONNECTOR (BOARD TO BOARD) 15P	
		< DIODE >	
D501	8-719-000-54	DIODE UZL-6L3	
D502	8-719-987-63	DIODE 1N4148M (A57)	

Ref. No.	Part No.	Description	Remark
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< IC >

IC501	8-759-633-78	IC	M5289P
IC502	8-759-822-26	IC	LC7522K
IC503	8-759-636-73	IC	M5218AL-22 (A57)
IC551	8-759-633-78	IC	M5289P

< TRANSISTOR >

Q504	8-729-224-62	TRANSISTOR	2SK246-GR (A57)
Q510	8-729-900-63	TRANSISTOR	DTA124ES (A57)
Q554	8-729-224-62	TRANSISTOR	2SK246-GR (A57)

< RESISTOR >

R507	1-247-887-00	CARBON	220K	5%	1/4W
R508	1-249-427-11	CARBON	6.8K	5%	1/4W
R509	1-249-427-11	CARBON	6.8K	5%	1/4W
R510-516					
	1-247-903-00	CARBON	1M	5%	1/4W
R517	1-249-408-11	CARBON	180	5%	1/4W
R518	1-249-417-11	CARBON	1K	5%	1/4W
R519	1-249-417-11	CARBON	1K	5%	1/4W
R520	1-249-435-11	CARBON	33K	5%	1/4W (A57)
R525	1-249-429-11	CARBON	10K	5%	1/4W (A57)
R529	1-249-429-11	CARBON	10K	5%	1/4W (A57)
R530	1-249-413-11	CARBON	470	5%	1/4W (A57)
R531-533					
	1-249-429-11	CARBON	10K	5%	1/4W (A57)
R534	1-249-427-11	CARBON	6.8K	5%	1/4W (A57)
R535	1-247-895-00	CARBON	470K	5%	1/4W (A57)
R536	1-249-441-11	CARBON	100K	5%	1/4W (A57)
R557	1-247-887-00	CARBON	220K	5%	1/4W
R558	1-249-427-11	CARBON	6.8K	5%	1/4W
R559	1-249-427-11	CARBON	6.8K	5%	1/4W
R560-566					
	1-247-903-00	CARBON	1M	5%	1/4W
R570	1-249-435-11	CARBON	33K	5%	1/4W (A57)
R575	1-249-429-11	CARBON	10K	5%	1/4W (A57)
R584	1-249-427-11	CARBON	6.8K	5%	1/4W (A57)
R585	1-247-895-00	CARBON	470K	5%	1/4W (A57)

*	1-647-207-11	IC BOARD

< IC >

IC701	8-749-922-91	IC	STK401-050 (D509)
IC701	8-749-922-95	IC	STK401-090 (A57)

Ref. No.	Part No.	Description	Remark
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*	1-647-211-11	JACK BOARD

< CAPACITOR >

C421	1-162-294-31	CERAMIC (A57)	0.001uF	10%	50V
C422	1-136-167-00	FILM (A57)	0.15uF	5%	50V
C423	1-162-219-31	CERAMIC (A57)	68PF	5%	50V
C424	1-162-286-31	CERAMIC (A57)	220PF	10%	50V
C425	1-126-163-11	ELECT (A57)	4.7uF	20%	50V
C426	1-126-163-11	ELECT (A57)	4.7uF	20%	50V
C427	1-162-286-31	CERAMIC (A57)	220PF	10%	50V
C428	1-126-163-11	ELECT (A57)	4.7uF	20%	50V
C429	1-124-034-51	ELECT (A57)	33uF	20%	16V
C430	1-124-034-51	ELECT (A57)	33uF	20%	16V
C431	1-162-306-11	CERAMIC (A57)	0.01uF	20%	16V

< CONNECTOR >

* CN401	1-568-826-11	SOCKET, CONNECTOR 7P (A57)
CN709	1-691-767-11	PLUG (MICRO CONNECTOR) 5P

< IC >

IC421	8-759-636-73	IC	M5218AL-22 (A57)
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< JACK >

J401	1-507-854-00	JACK, PHONE (MIC) (A57)
J702	1-507-854-00	JACK, PHONE (HEADPHONES)

< RESISTOR >

R421	1-249-441-11	CARBON	100K	5%	1/4W (A57)
R422	1-249-429-11	CARBON	10K	5%	1/4W (A57)
R423	1-249-417-11	CARBON	1K	5%	1/4W (A57)
R424	1-249-440-11	CARBON	82K	5%	1/4W (A57)
R425	1-249-429-11	CARBON	10K	5%	1/4W (A57)
R426	1-249-427-11	CARBON	6.8K	5%	1/4W (A57)
R427	1-249-440-11	CARBON	82K	5%	1/4W (A57)
R428	1-249-409-11	CARBON	220	5%	1/4W (A57)
R429	1-249-429-11	CARBON	10K	5%	1/4W (A57)
R430	1-249-405-11	CARBON	100	5%	1/4W (A57)

JACK

JW1

MAIN

Ref. No.	Part No.	Description	Remark		
R432	1-249-405-11	CARBON	100	5%	1/4W (A57)
R725	1-247-749-11	CARBON	560	5%	1/2W
R775	1-247-749-11	CARBON	560	5%	1/2W

< VARIABLE RESISTOR >

RV421	1-223-334-11	RES, VAR, CARBON 50K (MIC LEVEL) (A57)	*****		
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*	1-647-213-11	JW1 BOARD	*****		
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*	A-4360-064-A	MAIN BOARD, COMPLETE (AEP, EE)			
*	A-4360-065-A	MAIN BOARD, COMPLETE (G, IT)			
*	A-4360-066-A	MAIN BOARD, COMPLETE (UK)			
*	A-4360-067-A	MAIN BOARD, COMPLETE (E, AUS, EA)			
*	A-4360-068-A	MAIN BOARD, COMPLETE (MY, SP)	*****		

*	1-533-293-11	FUSE HOLDER			
*	3-309-144-31	HEAT SINK			
*	4-941-237-01	HEAT SINK			
*	4-942-204-01	PLATE, GROUND			
*	7-685-871-01	SCREW +BVTT 3X6 (S)			

< CAPACITOR >

<u>△</u> C1	1-161-744-00	CERAMIC	0.01uF		400V
C301	1-162-293-31	CERAMIC	820PF	10%	50V
C302	1-162-207-31	CERAMIC	22PF	5%	50V
C351	1-162-293-31	CERAMIC	820PF	10%	50V
C352	1-162-207-31	CERAMIC	22PF	5%	50V
C401	1-162-286-31	CERAMIC	220PF	10%	50V
C451	1-162-286-31	CERAMIC	220PF	10%	50V
C701	1-126-161-11	ELECT	2.2uF	20%	50V
C702	1-162-282-31	CERAMIC	100PF	10%	50V
C703	1-162-286-31	CERAMIC	220PF	10%	50V
C704	1-124-994-11	ELECT	100uF	20%	10V
C706	1-124-122-11	ELECT (D509)	100uF	20%	50V
C706	1-124-572-11	ELECT (A57)	100uF	20%	63V
C707	1-124-122-11	ELECT (D509)	100uF	20%	50V
C707	1-124-572-11	ELECT (A57)	100uF	20%	63V
C708	1-136-163-00	FILM	0.068uF	5%	50V
C709	1-136-163-00	FILM	0.068uF	5%	50V
C710	1-124-587-11	ELECT	220uF	20%	6.3V
C711	1-124-587-11	ELECT	220uF	20%	6.3V
C712	1-124-994-11	ELECT	100uF	20%	10V
C713	1-136-163-00	FILM	0.068uF	5%	50V

C714	1-136-163-00	FILM	0.068uF	5%	50V
C715	1-162-199-31	CERAMIC	10PF	5%	50V
C716	1-162-291-31	CERAMIC (G, IT)	560PF	10%	50V
C717	1-162-291-31	CERAMIC (G, IT)	560PF	10%	50V
C719	1-164-159-11	CERAMIC (G, IT)	0.1MF		50V
C721	1-161-494-00	CERAMIC (G, IT)	0.022uF		25V
C722	1-164-159-11	CERAMIC (G, IT)	0.1MF		50V
C723	1-164-159-11	CERAMIC (G, IT)	0.1MF		50V
C724	1-161-377-00	CERAMIC (G, IT)	0.0047uF	30%	16V
C725	1-164-159-11	CERAMIC (G, IT)	0.1MF		50V
C751	1-126-161-11	ELECT	2.2uF	20%	50V
C752	1-162-282-31	CERAMIC	100PF	10%	50V
C753	1-162-286-31	CERAMIC	220PF	10%	50V
C754	1-124-994-11	ELECT	100uF	20%	10V
C758	1-136-163-00	FILM	0.068uF	5%	50V
C759	1-136-163-00	FILM	0.068uF	5%	50V
C763	1-136-163-00	FILM	0.068uF	5%	50V
C764	1-136-163-00	FILM	0.068uF	5%	50V
C765	1-162-199-31	CERAMIC	10PF	5%	50V
C801	1-126-224-11	ELECT (D509)	4700uF	20%	42V
C801	1-126-258-11	ELECT (A57)	4700uF	20%	56V
C802	1-126-224-11	ELECT (D509)	4700uF	20%	42V
C802	1-126-258-11	ELECT (A57)	4700uF	20%	56V
C803	1-124-910-11	ELECT	47uF	20%	50V
C804	1-124-910-11	ELECT	47uF	20%	50V
C807	1-126-059-11	ELECT	10uF	20%	50V
C808	1-126-059-11	ELECT	10uF	20%	50V
C809	1-124-994-11	ELECT	100uF	20%	10V
C810	1-124-994-11	ELECT	100uF	20%	10V
C816	1-164-159-11	CERAMIC (G, IT)	0.1MF		50V
C818	1-161-021-11	CERAMIC	0.047uF	10%	25V
C819	1-161-021-11	CERAMIC	0.047uF	10%	25V
C823	1-126-059-11	ELECT	10uF	20%	50V
C824	1-126-696-11	ELECT	33uF	20%	35V
C825	1-126-059-11	ELECT	10uF	20%	50V
C830	1-124-910-11	ELECT (UK)	47uF	20%	50V

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark			
C831	1-161-021-11	CERAMIC (UK)	0.047uF	10%	25V	
C832	1-161-021-11	CERAMIC (UK)	0.047uF	10%	25V	
C852	1-164-159-11	CERAMIC (UK)	0.1uF		50V	
C853	1-164-159-11	CERAMIC (UK)	0.1uF		50V	
C854	1-136-169-00	FILM (UK)	0.22uF	5%	50V	
C855	1-136-169-00	FILM (UK)	0.22uF	5%	50V	
C856	1-126-059-11	ELECT (UK)	10uF	20%	50V	
< CONNECTOR >						
* CN1	1-564-321-00	PIN, CONNECTOR 2P				
CN2	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P (D509)				
* CN2	1-535-140-00	BASE POST 22MM (10MM PITCH) 3P (A57)				
* CN301	1-566-858-41	SOCKET, CONNECTOR 11P (SYSTEM CONTROL 1)				
* CN302	1-568-826-11	SOCKET, CONNECTOR 7P (A57)				
* CN303	1-568-834-11	SOCKET, CONNECTOR 15P				
CN501	1-691-170-11	PIN, CONNECTOR 13P				
CN503	1-691-172-11	PIN, CONNECTOR 15P				
* CN601	1-568-826-11	SOCKET, CONNECTOR 7P				
* CN702	1-564-506-11	PLUG, CONNECTOR 3P				
CN707	1-691-767-11	PLUG (MICRO CONNECTOR) 5P				
* CN801	1-566-859-11	SOCKET, CONNECTOR 15P (SYSTEM CONTROL 2)				
* CN802	1-566-210-11	PIN, CONNECTOR 3P (ONLY FOR PS-LX47P) (UK)				
* CN851	1-564-506-11	PLUG, CONNECTOR 3P (UK)				
* CN852	1-564-505-11	PLUG, CONNECTOR 2P (UK)				
< DIODE >						
D701-705	8-719-987-63	DIODE 1N4148M				
D802-805	8-719-933-50	DIODE HZS7C2L				
D813	8-719-987-63	DIODE 1N4148M				
D814	8-719-987-63	DIODE 1N4148M				
D822	8-719-934-22	DIODE HZS30-2L				
D823	8-719-014-74	DIODE UZP-6.2B				
D830-832	8-719-200-82	DIODE 11ES2 (UK)				
D851	8-719-987-63	DIODE 1N4148M (UK)				
D852	8-719-987-63	DIODE 1N4148M (UK)				
< IC >						
IC250	8-759-202-61	IC TC4094BP				
IC301	8-759-000-49	IC MC14066BCP				
IC302	8-759-634-51	IC M5218AP				

Ref. No.	Part No.	Description	Remark			
IC401	8-759-000-48	IC MC14052BCP				
IC402	8-759-000-48	IC MC14052BCP (EXCEPT UK)				
IC702	8-759-111-68	IC uPC1237HA				
IC801	8-759-071-48	IC TA7807S				
IC802	8-759-604-95	IC M5F79M07				
IC851	8-759-103-93	IC uPC393C (UK)				
< JACK >						
* J701	1-569-130-11	JACK, PIN 2P (SURROUND SPEAKER)				
< COIL >						
* L701	1-420-872-00	COIL, AIR CORE				
* L751	1-420-872-00	COIL, AIR CORE				
< TRANSISTOR >						
Q250	8-729-900-80	TRANSISTOR DTC114ES				
Q251	8-729-900-80	TRANSISTOR DTC114ES				
Q252	8-729-620-05	TRANSISTOR 2SC2603-EF				
Q301-303	8-729-900-63	TRANSISTOR DTA124ES				
Q304	8-729-900-80	TRANSISTOR DTC114ES				
Q701	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA				
Q702	8-729-900-63	TRANSISTOR DTA124ES				
Q751	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA				
Q801	8-729-141-83	TRANSISTOR 2SB1094-LK				
Q851	8-729-140-93	TRANSISTOR 2SB733-34 (UK)				
< RESISTOR >						
R250-252	1-249-413-11	CARBON 470 5% 1/4W				
R253	1-249-425-11	CARBON 4.7K 5% 1/4W				
R254	1-249-429-11	CARBON 10K 5% 1/4W				
R255	1-249-429-11	CARBON 10K 5% 1/4W				
R256	1-249-417-11	CARBON 1K 5% 1/4W (EXCEPT UK)				
R257	1-249-417-11	CARBON 1K 5% 1/4W (EXCEPT UK)				
R258	1-249-413-11	CARBON 470 5% 1/4W (A57)				
R301	1-247-897-11	CARBON 560K 5% 1/4W				
R302	1-249-437-11	CARBON 47K 5% 1/4W				
R303	1-247-897-11	CARBON 560K 5% 1/4W				
R304	1-249-429-11	CARBON 10K 5% 1/4W				
R319	1-249-432-11	CARBON 18K 5% 1/4W				
R320	1-249-435-11	CARBON 33K 5% 1/4W				
R327-329	1-249-433-11	CARBON 22K 5% 1/4W				
R351	1-247-897-11	CARBON 560K 5% 1/4W				
R352	1-249-437-11	CARBON 47K 5% 1/4W				
R353	1-247-897-11	CARBON 560K 5% 1/4W				

Ref. No.	Part No.	Description	Remark		
R354	1-249-429-11	CARBON	10K	5%	1/4W
R401	1-249-417-11	CARBON	1K	5%	1/4W
R402	1-249-417-11	CARBON	1K	5%	1/4W
R403	1-249-413-11	CARBON	470	5%	1/4W
R404	1-249-405-11	CARBON	100	5%	1/4W
R405	1-249-425-11	CARBON (EXCEPT UK)	4. 7K	5%	1/4W
R406	1-249-426-11	CARBON (EXCEPT UK)	5. 6K	5%	1/4W
R407	1-249-421-11	CARBON (EXCEPT UK)	2. 2K	5%	1/4W
R451	1-249-417-11	CARBON	1K	5%	1/4W
R452	1-249-417-11	CARBON	1K	5%	1/4W
R453	1-249-413-11	CARBON	470	5%	1/4W
R454	1-249-405-11	CARBON	100	5%	1/4W
R455	1-249-425-11	CARBON (EXCEPT UK)	4. 7K	5%	1/4W
R456	1-249-426-11	CARBON (EXCEPT UK)	5. 6K	5%	1/4W
R457	1-249-421-11	CARBON (EXCEPT UK)	2. 2K	5%	1/4W
R461-463					
	1-249-417-11	CARBON	1K	5%	1/4W
R701	1-249-417-11	CARBON	1K	5%	1/4W
R702	1-249-438-11	CARBON	56K	5%	1/4W
R703	1-249-413-11	CARBON	470	5%	1/4W
R704	1-249-438-11	CARBON	56K	5%	1/4W
△R705	1-212-881-11	FUSIBLE	100	5%	1/4W F
△R706	1-212-881-11	FUSIBLE	100	5%	1/4W F
R707	1-249-417-11	CARBON	1K	5%	1/4W
R708	1-249-430-11	CARBON	12K	5%	1/4W
R709	1-249-441-11	CARBON	100K	5%	1/4W
△R710	1-217-156-00	METAL PLATE	0. 22		5W
R711	1-247-727-11	CARBON	10	5%	1/2W
R712	1-247-727-11	CARBON	10	5%	1/2W
R713	1-249-437-11	CARBON	47K	5%	1/4W
R714	1-249-429-11	CARBON	10K	5%	1/4W
R715	1-249-441-11	CARBON	100K	5%	1/4W
R716	1-249-417-11	CARBON	1K	5%	1/4W
R718	1-249-437-11	CARBON	47K	5%	1/4W
R719	1-249-486-11	CARBON	12K	5%	1/2W
△R720	1-216-456-00	METAL OXIDE (D509)	820	5%	2W F
△R720	1-216-457-00	METAL OXIDE (A57)	1. 2K	5%	2W F
R721	1-247-727-11	CARBON	10	5%	1/2W
R751	1-249-417-11	CARBON	1K	5%	1/4W
R752	1-249-438-11	CARBON	56K	5%	1/4W
R753	1-249-413-11	CARBON	470	5%	1/4W
R754	1-249-438-11	CARBON	56K	5%	1/4W

Ref. No.	Part No.	Description	Remark		
R757	1-249-417-11	CARBON	1K	5%	1/4W
R758	1-249-430-11	CARBON	12K	5%	1/4W
R759	1-249-441-11	CARBON	100K	5%	1/4W
△R760	1-217-156-00	METAL PLATE	0. 22		5W
R761	1-247-727-11	CARBON	10	5%	1/2W
R762	1-247-727-11	CARBON	10	5%	1/2W
R763	1-249-437-11	CARBON	47K	5%	1/4W
R771	1-247-727-11	CARBON	10	5%	1/2W
△R801	1-216-481-11	METAL OXIDE	1. 2K	5%	3W F
△R802	1-216-481-11	METAL OXIDE	1. 2K	5%	3W F
R805	1-247-761-11	CARBON	5. 6K	5%	1/2W
R806	1-249-421-11	CARBON	2. 2K	5%	1/4W
R851	1-249-421-11	CARBON	2. 2K	5%	1/4W (UK)
R852	1-249-441-11	CARBON	100K	5%	1/4W (UK)
R853	1-249-417-11	CARBON	1K	5%	1/4W (UK)
R854	1-249-426-11	CARBON	5. 6K	5%	1/4W (UK)
R855	1-249-438-11	CARBON	56K	5%	1/4W (UK)
R856-859					
	1-249-417-11	CARBON	1K	5%	1/4W (UK)
R860	1-247-730-11	CARBON	18	5%	1/2W (UK)
R861	1-249-389-11	CARBON	4. 7	5%	1/4W (UK)
< RELAY >					
RY701	1-515-765-11	RELAY			
< SWITCH >					
△S1	1-554-920-51	SWITCH, PUSH (AC POWER) (1 KEY) (POWER)			
< TERMINAL >					
TM701	1-537-240-11	TERMINAL BOARD (CHECKER PIN) (SPEAKER)			

*	A-4360-075-A	PANEL BOARD, COMPLETE (D509)			
*	A-4360-076-A	PANEL BOARD, COMPLETE (A57)			

*	4-921-941-01	CUSHION (FL)			
*	4-923-103-01	HOLDER, FL TUBE			
*	4-957-100-01	HOLDER (5 GANG), LED			
< CAPACITOR >					
C601	1-126-161-11	ELECT	2. 2uF	20%	50V
C602	1-162-282-31	CERAMIC	100PF	10%	50V
C603	1-162-282-31	CERAMIC	100PF	10%	50V
C604	1-126-161-11	ELECT	2. 2uF	20%	50V
C605	1-126-300-11	ELECT	0. 47uF	20%	50V
C606	1-124-250-00	ELECT	0. 15uF	20%	50V
C607	1-126-301-11	ELECT	1uF	20%	50V
C608	1-126-059-11	ELECT	10uF	20%	50V
C609	1-126-059-11	ELECT	10uF	20%	50V

The components identified by mark △ or dotted line with mark. △ are critical for safety. Replace only with part number specified.

PANEL

Ref. No.	Part No.	Description	Remark
C611	1-164-159-11	CERAMIC 0.1uF	50V
C612	1-164-159-11	CERAMIC 0.1uF	50V
C651	1-126-161-11	ELECT 2.2uF	20% 50V
C652	1-162-282-31	CERAMIC 100PF	10% 50V
C653	1-162-282-31	CERAMIC 100PF	10% 50V
C654	1-126-161-11	ELECT 2.2uF	20% 50V
C655	1-126-300-11	ELECT 0.47uF	20% 50V
C656	1-124-250-00	ELECT 0.15uF	20% 50V
C657	1-126-301-11	ELECT 1uF	20% 50V
C902	1-125-486-11	DOUBLE LAYERS 0.22F	5.5V
C905	1-161-379-00	CERAMIC 0.01uF	20% 25V
C909	1-164-159-11	CERAMIC 0.1uF	50V
C911	1-164-159-11	CERAMIC 0.1uF	50V
C912	1-164-159-11	CERAMIC 0.1uF	50V
C921	1-162-294-31	CERAMIC 0.001uF	10% 50V
C922	1-164-159-11	CERAMIC 0.1uF	50V
C924	1-164-159-11	CERAMIC 0.1uF	50V
C941-946	1-162-290-31	CERAMIC 470PF	10% 50V
C948-950	1-162-290-31	CERAMIC 470PF	10% 50V
C961	1-162-291-31	CERAMIC 560PF	10% 50V
< VIBRATOR >			
CF901	1-577-101-11	VIBRATOR, CERAMIC (4.19MHz)	
< COMPOSITION CIRCUIT BLOCK >			
CP901	1-236-985-11	COMPOSITION CIRCUIT BLOCK (100kX9)	
CP902-904	1-232-998-11	COMPOSITION CIRCUIT BLOCK (100kX7)	
< DIODE >			
D601	8-719-987-63	DIODE 1N4148M	
D602	8-719-026-72	LED SML1860A	(DYNAMIC BASS SYSTEM ON/OFF)
D603	8-719-026-72	LED SML1860A	(DYNAMIC BASS SYSTEM ON/OFF)
D651	8-719-987-63	DIODE 1N4148M	
D684	8-719-987-63	DIODE 1N4148M	
D907	8-719-987-63	DIODE 1N4148M	
D911	8-719-313-69	LED SEL3210S-CD (P. FUNCTION)	
D912	8-719-313-69	LED SEL3210S-CD (EFFECT)	
D913	8-719-313-69	LED SEL3210S-CD (KARAOKE PON) (A57)	
D916	8-719-313-69	LED SEL3210S-CD (OFF)	
D917	8-719-313-69	LED SEL3210S-CD (HIGH)	
D918	8-719-313-69	LED SEL3210S-CD (MID)	
D919	8-719-313-69	LED SEL3210S-CD (LOW)	
D920	8-719-313-69	LED SEL3210S-CD (SIMULATED)	
D921	8-719-313-69	LED SEL3210S-CD (HALL)	

Ref. No.	Part No.	Description	Remark
D922	8-719-301-39	LED SEL2210S (HALL/1)	
D923	8-719-301-39	LED SEL2210S (DANCE/2)	
D924	8-719-301-39	LED SEL2210S (MOVIE/3)	
D925	8-719-301-39	LED SEL2210S (WM/4)	
D926	8-719-301-39	LED SEL2210S (CAR/5)	
D930-936			
	8-719-987-63	DIODE 1N4148M	
D938	8-719-987-63	DIODE 1N4148M	
D939	8-719-313-69	LED SEL3210S-CD (PHONO)	
D940	8-719-313-69	LED SEL3210S-CD (TUNER)	
D941	8-719-313-69	LED SEL3210S-CD (CD)	
D942	8-719-313-69	LED SEL3210S-CD (MEMORY)	
D943	8-719-313-69	LED SEL3210S-CD (PERSONAL FILE)	
D944	8-719-313-69	LED SEL3210S-CD (TAPE)	
D945	8-719-313-69	LED SEL3210S-CD (SELECT 5)	
D946	8-719-313-69	LED SEL3210S-CD (EQUALIZER)	
D947	8-719-313-69	LED SEL3210S-CD (VIDEO)	
D948-955			
	8-719-987-63	DIODE 1N4148M	
< FLUORESCENT INDICATOR >			
FL901	1-517-151-11	INDICATOR TUBE, FLUORESCENT	
< IC >			
IC601	8-759-634-50	IC M5218AL	
IC901	8-759-164-69	IC uPD78042GF-018-3B9	
IC903	8-759-991-11	IC XR1091DCP	
< TRANSISTOR >			
Q601	8-729-224-62	TRANSISTOR 2SK246-GR	
Q602	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q603	8-729-900-36	TRANSISTOR DTC124ES	
Q604	8-729-900-61	TRANSISTOR DTA114ES	
Q651	8-729-224-62	TRANSISTOR 2SK246-GR	
Q652	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q911	8-729-900-80	TRANSISTOR DTC114ES	
Q912	8-729-900-80	TRANSISTOR DTC114ES	
Q913	8-729-900-80	TRANSISTOR DTC114ES (A57)	
Q916-923			
	8-729-900-80	TRANSISTOR DTC114ES	
Q924-926			
	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q931-936			
	8-729-900-80	TRANSISTOR DTC114ES	
Q942	8-729-141-26	TRANSISTOR 2SC3622A-LK	
< RESISTOR >			
R601	1-249-441-11	CARBON 100K 5%	1/4W
R602	1-249-429-11	CARBON 10K 5%	1/4W

Ref. No.	Part No.	Description	Remark		
R603	1-247-903-00	CARBON	1M	5%	1/4W
R604	1-249-420-11	CARBON	1.8K	5%	1/4W
R605	1-249-434-11	CARBON	27K	5%	1/4W
R606	1-247-881-00	CARBON	120K	5%	1/4W
R607	1-249-412-11	CARBON	390	5%	1/4W
R608	1-249-427-11	CARBON	6.8K	5%	1/4W
R611	1-249-415-11	CARBON	680	5%	1/4W
R612	1-249-441-11	CARBON	100K	5%	1/4W
R613	1-249-435-11	CARBON	33K	5%	1/4W
R614	1-249-425-11	CARBON	4.7K	5%	1/4W
R622	1-249-425-11	CARBON	4.7K	5%	1/4W
R651	1-249-441-11	CARBON	100K	5%	1/4W
R652	1-249-429-11	CARBON	10K	5%	1/4W
R653	1-247-903-00	CARBON	1M	5%	1/4W
R654	1-249-420-11	CARBON	1.8K	5%	1/4W
R655	1-249-434-11	CARBON	27K	5%	1/4W
R656	1-247-881-00	CARBON	120K	5%	1/4W
R657	1-249-412-11	CARBON	390	5%	1/4W
R658	1-249-427-11	CARBON	6.8K	5%	1/4W
R681	1-249-433-11	CARBON	22K	5%	1/4W
R911	1-249-416-11	CARBON	820	5%	1/4W
R912	1-249-416-11	CARBON	820	5%	1/4W
R913	1-249-416-11	CARBON	820	5%	1/4W (A57)
R916-922					
	1-249-411-11	CARBON	330	5%	1/4W
R923-925					
	1-249-441-11	CARBON	100K	5%	1/4W
R927	1-249-441-11	CARBON	100K	5%	1/4W
R928	1-249-396-11	CARBON	18	5%	1/6W
R929	1-249-441-11	CARBON	100K	5%	1/4W
R931	1-249-441-11	CARBON	100K	5%	1/4W
R932	1-249-396-11	CARBON	18	5%	1/6W
R935-938					
	1-249-411-11	CARBON	330	5%	1/4W
R951	1-249-405-11	CARBON	100	5%	1/4W
R953	1-249-419-11	CARBON	1.5K	5%	1/4W
R954	1-249-417-11	CARBON	1K	5%	1/4W
R956-959					
	1-249-396-11	CARBON	18	5%	1/6W
R963	1-249-437-11	CARBON	47K	5%	1/4W
R964	1-249-417-11	CARBON	1K	5%	1/4W
< VARIABLE RESISTOR >					
RV601	1-238-977-11	RES, VAR, CARBON 100K/100K (DYNAMIC BASS SYSTEM LEVEL)			
RV602	1-238-977-11	RES, VAR, CARBON 100K/100K (DYNAMIC BASS SYSTEM FREQUENCY (Hz))			
RV604	1-241-385-11	RES, VAR, CARBON 100K (BALANCE)			

Ref. No.	Part No.	Description	Remark		
< SWITCH >					
S901	1-554-303-21	SWITCH, TACTILE (DISPLAY)			
S902	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL ▲)			
S903	1-554-303-21	SWITCH, TACTILE (MEMORY)			
S904	1-554-303-21	SWITCH, TACTILE (SURROUND LEVEL)			
S905	1-554-303-21	SWITCH, TACTILE (SURROUND MODE)			
S906	1-554-303-21	SWITCH, TACTILE (DYNAMIC BASS SYSTEM ON/OFF)			
S907	1-554-303-21	SWITCH, TACTILE (KARAOKE PON) (A57)			
S909	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL ►)			
S910	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL ◀)			
S911	1-554-303-21	SWITCH, TACTILE (PERSONAL FILE)			
S912	1-554-303-21	SWITCH, TACTILE (SELECT 5)			
S913	1-554-303-21	SWITCH, TACTILE (EQUALIZER)			
S914	1-554-303-21	SWITCH, TACTILE (EQ FLAT)			
S915	1-554-303-21	SWITCH, TACTILE (EFFECT)			
S917	1-554-303-21	SWITCH, TACTILE (PHONO)			
S918	1-554-303-21	SWITCH, TACTILE (CURSOR CONTROL ▼)			
S919	1-554-303-21	SWITCH, TACTILE (TUNER)			
S920	1-554-303-21	SWITCH, TACTILE (CD)			
S921	1-554-303-21	SWITCH, TACTILE (TAPE)			
S922	1-554-303-21	SWITCH, TACTILE (VIDEO)			
S923	1-554-303-21	SWITCH, TACTILE (P. FUNCTION)			

*	A-4360-082-A	PIN JACK BOARD, COMPLETE (D509)			
*	A-4360-083-A	PIN JACK BOARD, COMPLETE (A57)			

< CAPACITOR >					
C101	1-162-288-31	CERAMIC	330PF	10%	50V
C102	1-126-161-11	ELECT	2.2uF	20%	50V
C103	1-162-282-31	CERAMIC	100PF	10%	50V
C104	1-162-219-31	CERAMIC	68PF	5%	50V
C105	1-124-910-11	ELECT	47uF	20%	50V
C106	1-130-480-00	MYLAR	0.0056uF	5%	50V
C107	1-130-473-00	MYLAR	0.0015uF	5%	50V
C108	1-124-464-11	ELECT	0.22uF	20%	50V
C109	1-124-034-51	ELECT	33uF	20%	16V
C110	1-162-286-31	CERAMIC	220PF	10%	50V
C111	1-126-233-11	ELECT	22uF	20%	50V
C112	1-162-286-31	CERAMIC	220PF	10%	50V
C113	1-126-233-11	ELECT	22uF	20%	50V
C119	1-162-286-31	CERAMIC	220PF	10%	50V
C120	1-164-159-11	CERAMIC	0.1uF		50V
C121	1-124-034-51	ELECT	33uF	20%	16V
C151	1-162-288-31	CERAMIC	330PF	10%	50V
C152	1-126-161-11	ELECT	2.2uF	20%	50V
C153	1-162-282-31	CERAMIC	100PF	10%	50V

Ref. No.	Part No.	Description	Remark		
C154	1-162-219-31	CERAMIC	68PF	5%	50V
C155	1-124-910-11	ELECT	47uF	20%	50V
C156	1-130-480-00	MYLAR	0.0056uF	5%	50V
C157	1-130-473-00	MYLAR	0.0015uF	5%	50V
C158	1-124-464-11	ELECT	0.22uF	20%	50V
C159	1-124-034-51	ELECT	33uF	20%	16V
C160	1-162-286-31	CERAMIC	220PF	10%	50V
C161	1-126-233-11	ELECT	22uF	20%	50V
C162	1-162-286-31	CERAMIC	220PF	10%	50V
C163	1-126-233-11	ELECT	22uF	20%	50V
C169	1-162-286-31	CERAMIC	220PF	10%	50V
C170	1-164-159-11	CERAMIC	0.1uF		50V
C171	1-124-034-51	ELECT	33uF	20%	16V

< CONNECTOR >

* CN101 1-691-183-11 CONNECTOR (BOARD TO BOARD) 13P

< IC >

IC101 8-759-636-73 IC M5218AL-22
 IC102 8-759-000-48 IC MC14052BCP

< JACK >

J101 1-565-352-11 JACK, PIN 2P (PHONO)
 J102 1-565-258-11 JACK, PIN 4P (CD, VIDEO)

< RESISTOR >

R101 1-249-417-11 CARBON 1K 5% 1/4W
 R102 1-249-441-11 CARBON 100K 5% 1/4W
 R103 1-249-417-11 CARBON 1K 5% 1/4W
 R104 1-249-441-11 CARBON 100K 5% 1/4W
 R105 1-249-416-11 CARBON 820 5% 1/4W

R106 1-247-897-11 CARBON 560K 5% 1/4W
 R107 1-249-437-11 CARBON 47K 5% 1/4W
 R108 1-249-417-11 CARBON 1K 5% 1/4W
 R109 1-249-441-11 CARBON 100K 5% 1/4W
 R110 1-249-405-11 CARBON 100 5% 1/4W

R112 1-249-423-11 CARBON 3.3K 5% 1/4W
 R113 1-249-429-11 CARBON 10K 5% 1/4W
 R114 1-249-417-11 CARBON 1K 5% 1/4W
 R115 1-247-903-00 CARBON 1M 5% 1/4W
 R120 1-249-405-11 CARBON 100 5% 1/4W

R122-124

1-249-417-11 CARBON 1K 5% 1/4W
 R151 1-249-417-11 CARBON 1K 5% 1/4W
 R152 1-249-441-11 CARBON 100K 5% 1/4W
 R153 1-249-417-11 CARBON 1K 5% 1/4W
 R154 1-249-441-11 CARBON 100K 5% 1/4W

R155 1-249-416-11 CARBON 820 5% 1/4W

Ref. No.	Part No.	Description	Remark		
R156	1-247-897-11	CARBON	560K	5%	1/4W
R157	1-249-437-11	CARBON	47K	5%	1/4W
R158	1-249-417-11	CARBON	1K	5%	1/4W
R159	1-249-441-11	CARBON	100K	5%	1/4W
R160	1-249-405-11	CARBON	100	5%	1/4W
R162	1-249-423-11	CARBON	3.3K	5%	1/4W
R163	1-249-429-11	CARBON	10K	5%	1/4W
R164	1-249-417-11	CARBON	1K	5%	1/4W
R165	1-247-903-00	CARBON	1M	5%	1/4W
R170	1-249-405-11	CARBON	100	5%	1/4W

* 1-647-203-11 PS BOARD

< CAPACITOR >

C805 1-124-887-00 ELECT 3300uF 20% 16V
 C806 1-124-887-00 ELECT 3300uF 20% 16V
 C811 1-101-006-00 CERAMIC 0.047uF 50V

(A57)
 C811 1-136-165-00 FILM 0.1uF 5% 50V
 (D509)
 C812 1-101-006-00 CERAMIC 0.047uF 50V
 (A57)

C812 1-136-165-00 FILM 0.1uF 5% 50V
 (D509)

C813 1-161-021-11 CERAMIC 0.047uF 10% 25V
 C814 1-161-021-11 CERAMIC 0.047uF 10% 25V
 △C815 1-102-394-11 CERAMIC 0.01uF 250V
 C817 1-126-162-11 ELECT 3.3uF 20% 50V

C822 1-124-920-11 ELECT 330uF 20% 63V

< DIODE >

D801 8-719-302-38 DIODE RBV-602-01
 D806-809

8-719-200-77 DIODE 10E2N
 D811 8-719-987-63 DIODE 1N4148M
 D812 8-719-987-63 DIODE 1N4148M
 D821 8-719-200-77 DIODE 10E2N

< IC LINK >

△ICP801 1-532-843-21 LINK, IC (PRF2500) (2.5A)
 △ICP802 1-532-843-21 LINK, IC (PRF2500) (2.5A)

< RESISTOR >

R803 1-249-428-11 CARBON 8.2K 5% 1/4W
 R804 1-249-428-11 CARBON 8.2K 5% 1/4W

The components identified by
 mark △ or dotted line with mark.
 △ are critical for safety.
 Replace only with part number
 specified.

Ref. No.	Part No.	Description	Remark			
*	1-647-204-11	PT BOARD *****				

*	1-647-205-11	S BOARD (UK) *****				
		< CAPACITOR >				
C857	1-162-306-11	CERAMIC (UK)	0.01uF	20%	16V	
		< CONNECTOR >				
* CN850	1-564-506-11	PLUG, CONNECTOR 3P (UK)				
		< IC >				
IC852	8-759-947-34	IC LM35DZ (UK)				
		< RESISTOR >				
R862	1-249-405-11	CARBON	100	5%	1/4W (UK)	

*	A-4360-078-A	S. PANEL BOARD, COMPLETE *****				
		< CAPACITOR >				
C901	1-124-473-11	ELECT	1000uF	20%	10V	
C903	1-124-994-11	ELECT	100uF	20%	10V	
C904	1-164-159-11	CERAMIC	0.1uF		50V	
C906	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C907	1-136-159-00	FILM	0.033uF	5%	50V	
C908	1-164-159-11	CERAMIC	0.1uF		50V	
C923	1-126-059-11	ELECT	10uF	20%	50V	
C925	1-126-059-11	ELECT	10uF	20%	50V	
C938	1-126-101-11	ELECT	100uF	20%	16V	
		< CONNECTOR >				
* CN602	1-568-826-11	SOCKET, CONNECTOR 7P				
* CN606	1-568-828-11	SOCKET, CONNECTOR 9P				
* CN901	1-568-834-11	SOCKET, CONNECTOR 15P				
		< DIODE >				
D901	8-719-000-81	DIODE UZL-7L3				
D902	8-719-987-63	DIODE 1N4148M				
D903	8-719-200-82	DIODE 11ES2				
D904	8-719-200-82	DIODE 11ES2				
D905	8-719-987-63	DIODE 1N4148M				
D908	8-719-987-63	DIODE 1N4148M				
D909	8-719-987-63	DIODE 1N4148M				

Ref. No.	Part No.	Description	Remark			
D910	8-719-200-82	DIODE	11ES2			
D928	8-719-987-63	DIODE	1N4148M			
D929	8-719-000-60	DIODE	UZL-6M2			
D980	8-719-200-82	DIODE	11ES2			
D981	8-719-987-63	DIODE	1N4148M			
< IC >						
IC902	8-759-635-63	IC	M51943BSL			
< COIL >						
L901	1-408-080-00	INDUCTOR	100uH			
L921	1-408-121-00	INDUCTOR	22uH			
L922	1-408-121-00	INDUCTOR	22uH			
< TRANSISTOR >						
Q901	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q902	8-729-620-05	TRANSISTOR	2SC2603-EF			
< RESISTOR >						
R623	1-249-441-11	CARBON	100K	5%	1/4W	
R624	1-249-435-11	CARBON	33K	5%	1/4W	
R625	1-249-426-11	CARBON	5.6K	5%	1/4W	
R674	1-249-435-11	CARBON	33K	5%	1/4W	
R675	1-249-426-11	CARBON	5.6K	5%	1/4W	
R901	1-249-429-11	CARBON	10K	5%	1/4W	
R902-904						
	1-249-433-11	CARBON	22K	5%	1/4W	
R905	1-249-441-11	CARBON	100K	5%	1/4W	
R906	1-249-417-11	CARBON	1K	5%	1/4W	
R907	1-249-441-11	CARBON	100K	5%	1/4W	
R941-943						
	1-249-417-11	CARBON	1K	5%	1/4W	
R944	1-249-429-11	CARBON	10K	5%	1/4W	
R945-947						
	1-249-417-11	CARBON	1K	5%	1/4W	
R948	1-249-429-11	CARBON	10K	5%	1/4W	
R952	1-249-393-11	CARBON	10	5%	1/4W	
R961	1-249-429-11	CARBON	10K	5%	1/4W	
R962	1-249-429-11	CARBON	10K	5%	1/4W	

*	A-4360-079-A	VR BOARD, COMPLETE				

< CAPACITOR >						
C627	1-126-300-11	ELECT	0.47uF	20%	50V	
C628	1-164-159-11	CERAMIC	0.1uF		50V	
C677	1-126-300-11	ELECT	0.47uF	20%	50V	
C917	1-124-472-11	ELECT	470uF	20%	10V	
C935	1-124-443-00	ELECT	100uF	20%	10V	

VR

Ref. No.	Part No.	Description	Remark
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< CONNECTOR >

* CN605	1-564-506-11	PLUG, CONNECTOR 3P	
* CN607	1-568-828-11	SOCKET, CONNECTOR 9P	

< DIODE >

D681-683

	8-719-815-85	DIODE	1S1585
D971	8-719-010-32	DIODE	UZ-4.7BSA
D972	8-719-200-82	DIODE	11ES2
D973	8-719-200-82	DIODE	11ES2

< IC >

IC904 8-759-820-62 IC LB1639

< TRANSISTOR >

Q605	8-729-900-63	TRANSISTOR	DTA124ES
Q621	8-729-141-26	TRANSISTOR	2SC3622A-LK
Q671	8-729-141-26	TRANSISTOR	2SC3622A-LK
Q681	8-729-900-61	TRANSISTOR	DTA114ES

< RESISTOR >

R620	1-249-425-11	CARBON	4.7K	5%	1/4W
R621	1-249-417-11	CARBON	1K	5%	1/4W
R670	1-249-425-11	CARBON	4.7K	5%	1/4W
R671	1-249-417-11	CARBON	1K	5%	1/4W
R682	1-249-425-11	CARBON	4.7K	5%	1/4W
R974	1-249-405-11	CARBON	100	5%	1/4W
R975	1-249-433-11	CARBON	22K	5%	1/4W
R976	1-249-433-11	CARBON	22K	5%	1/4W
R977	1-249-412-11	CARBON	390	5%	1/4W

< VARIABLE RESISTOR >

RV603 1-223-404-11 RES, VAR, CARBON 100K/100K/10K (VOLUME)

Ref. No.	Part No.	Description	Remark
----------	----------	-------------	--------

MISCELLANEOUS

17	1-575-905-31	WIRE, FLAT TYPE (9 CORE)	
64	1-690-114-31	WIRE, FLAT TYPE (7 CORE)	
△65	1-575-654-11	CORD, POWER (AEP, G, IT, EE, EA, MY, SP)	
△66	1-575-656-11	CORD, POWER (E)	
△67	1-690-608-11	CORD, POWER (AUS)	
69	1-690-094-11	WIRE, FLAT TYPE (15 CORE)	
70	1-690-992-11	WIRE, FLAT TYPE (7 CORE) (A57)	
△74	1-575-669-21	CORD, POWER (UK)	
△F1	1-532-259-00	FUSE, TIME-LAG (T1. 6A)	
△F2	1-532-259-00	FUSE, TIME-LAG (T1. 6A)	
△F801	1-532-203-00	FUSE, TIME-LAG (T2A)	
△F802	1-532-203-00	FUSE, TIME-LAG (T2A)	
△T1	1-423-527-11	TRANSFORMER, POWER (D509)	
△T1	1-423-528-11	TRANSFORMER, POWER (E, AUS, EA, MY)	
△T1	1-423-602-11	TRANSFORMER, POWER (SP)	

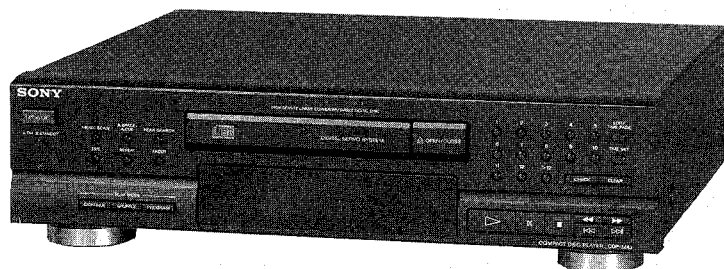
 HARDWARE LIST

#1	7-621-849-00	SCREW (BV/RING)
#2	7-682-560-04	SCREW +BVTT 4X6 (S)
#3	7-685-650-79	SCREW +BVTP 3X16 TYPE2
#4	7-685-871-01	SCREW +BVTT 3X6 (S)
#5	7-682-548-04	SCREW +BVTT 3X8 (S)
#6	7-685-645-79	SCREW +BVTP 3X6 TYPE2
#7	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S

The components identified by
 mark △ or dotted line with mark.
 △ are critical for safety.
 Replace only with part number
 specified.

CDP-M43/M54

SERVICE MANUAL



CDP-M43 is the CD player section in
LBT-D507/ D607/ D707,
LBT-A50/A60/A70 series

Photo : CDP-M43

AEP Model
UK Model
E Model
Australian Model
CDP-M43

AEP Model
UK Model
E Model
CDP-M54

Model Name Using Similar Mechanism	CDP-497/597
CD Mechanism Type	CDM-14L-5BD8A
Optical Pick-Up Block Type	BU-5BD8A

SPECIFICATIONS

Compact disc player

Frequency response	2 Hz to 20 kHz ± 0.5 dB
Signal-to-noise ratio	More than 105 dB CDP-M54 More than 100 dB CDP-M43
Dynamic range	More than 98 dB CDP-M54 More than 92 dB CDP-M43
Harmonic distortion	Less than 0.003% CDP-M54 Less than 0.004% CDP-M43
Channel separation	More than 102 dB CDP-M54 More than 95 dB CDP-M43

Outputs

LINE OUT (FIXED)(phono jacks)	Output level 2 V(at 50 kilohms) Load impedance over 10 kilohms
LINE OUT (VARIABLE)(phono jacks)..... CDP-M54	Output level max. 2 V(at 50 kilohms) Load impedance over 50 kilohms
PHONES (stereo phone jack)..... CDP-M54	Output level max. 10 mW Load impedance 32 ohms

General

Power requirements	European model: 220 - 230V AC, 50/60Hz UK, Australian model: 240 V AC, 50Hz E model: 110 - 120, 220 - 240V AC, 50/60Hz
--------------------	--

Power consumption	12 W
Dimensions (approx., including projections)	355 \times 95 \times 325 mm(w/h/d) (14 \times 3 $\frac{3}{4}$ \times 12 $\frac{7}{8}$ inches)
Weight (approx.)	3.2 kg(7 lbs 1 oz)
Remote commander	(RM-D597)..... CDP-M54
Remote control system	Infrared control
Power requirements	3 V DC with two R6 (size AA) batteries
Dimensions (approx., including projections)	40 \times 20 \times 175 mm (w/h/d) (1 $\frac{5}{8}$ \times 1 $\frac{1}{8}$ \times 7 inches)
Weight (approx.)	95 g(4 oz)
Supplied accessories	
Audio cord	(1)(2 Phono plugs-2 phono plugs)
Remote commander	(1)..... CDP-M54
Sony SUM-3 (NS) batteries	(2)..... CDP-M54

Design and specifications are subject to change without notice.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This Compact Disc player is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the rear exterior.





COMPACT DISC PLAYER
SONY®

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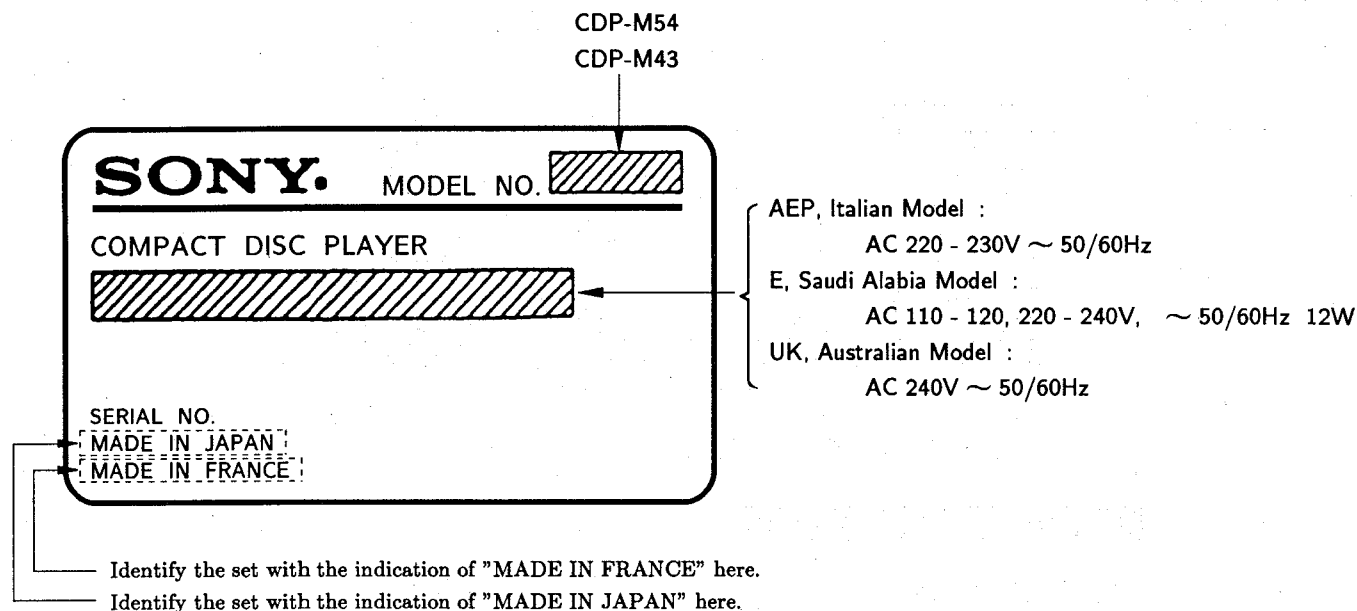
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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MODEL IDENTIFICATION

- Specification Label -

**NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT**

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

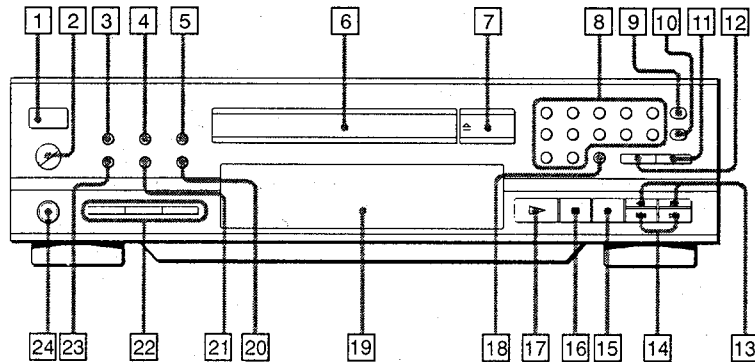
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30cm away from the objective lens.

SECTION 1 GENERAL

This section is extracted from instruction manual.

1-1 IDENTIFYING THE PARTS

CDP-M54 model

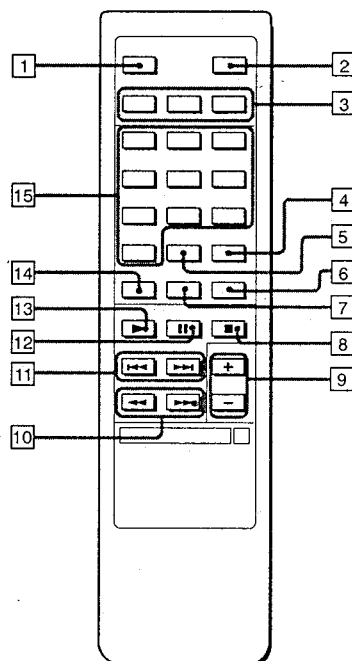


Front Panel

- 1 POWER switch (20)
- 2 LINE OUT/PHONE LEVEL control (14)
- 3 MUSIC SCAN button (40)
- 4 A.SPACE/A.CUE button (28, 62)
- 5 PEAK SEARCH button (60)
- 6 Disc tray (20)
- 7 ▲ OPEN/CLOSE button (20)
- 8 Numeric buttons (24, 38, 48, 52)
- 9 EDIT/TIME FADE button (52, 58)
- 10 TIME SET button (54, 58)
- 11 CLEAR (program clear) button (36, 42)
- 12 CHECK (program check) button (36)
- 13 ◀◀/▶▶ (manual search) buttons (26, 46)
- 14 ◀◀/▶▶ (AMS*) buttons (24, 48)

- 15 ■ (stop) button (22)
- 16 || (pause) button (22)
- 17 ▶ (play) button (22)
- 18 > 12 (over 12) button (24)
- 19 Display window (20)
- 20 FADER button (46)
- 21 REPEAT button (44)
- 22 Play mode buttons
 - CONTINUE button (30, 34, 38, 56)
 - SHUFFLE button (30, 34, 38, 56)
 - PROGRAM button (34, 48)
- 23 TIME button (22)
- 24 PHONES jack

* AMS is the abbreviation of Automatic Music Sensor.



Remote Commander

..... CDP-M54

- 1 A. SPACE/A. CUE button (28, 62)
- 2 MUSIC SCAN button (40)
- 3 Play mode buttons
 - CONTINUE button (30, 34, 38, 56)
 - SHUFFLE button (30, 34, 38, 56)
 - PROGRAM button (34, 48)
- 4 CLEAR (program clear) button (36, 42)
- 5 > 10 (over 10) button (24)
- 6 FADER button (46)
- 7 REPEAT button (44)
- 8 ■ (stop) button (22)
- 9 LINE OUT LEVEL buttons (14)
- 10 ◀◀/▶▶ (manual search) buttons (26, 46)
- 11 ◀◀/▶▶ (AMS*) buttons (24, 48)
- 12 || (pause) button (22)
- 13 ▶ (play) button (22)
- 14 TIME button (22)
- 15 Numeric buttons (24, 38, 48, 52)

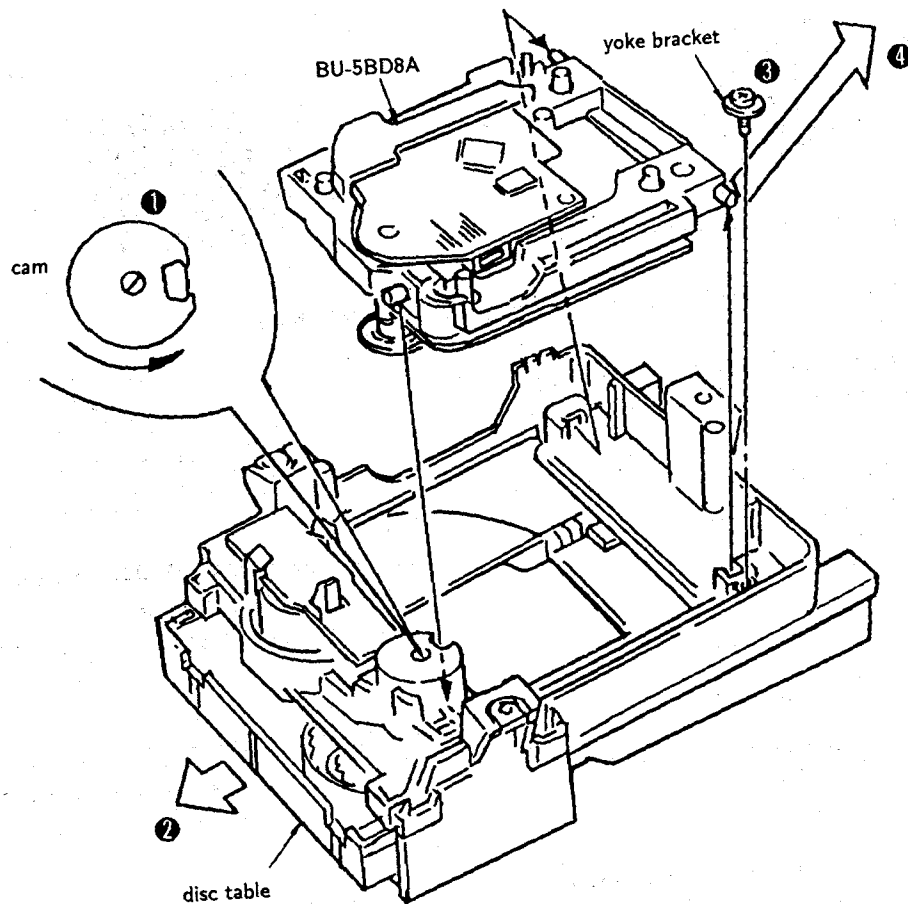
* AMS is the abbreviation of Automatic Music Sensor.

SECTION 2 DISASSEMBLY

Note :

Follow the disassembly procedure in the numerical order given.

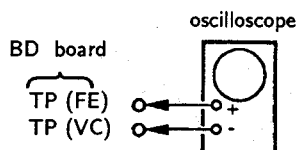
- ① Turn the cam to the direction of arrow (Counter clock wise) by minus screw driver.
- ② Take off the disc table.
- ③ Remove the yoke bracket.
- ④ Remove the MD (BU-5BD8A) to the direction of arrow.



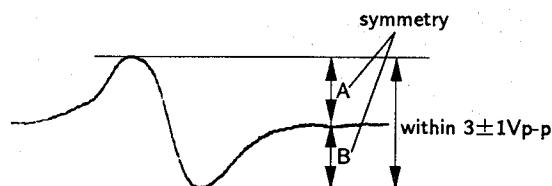
SECTION 3 ELECTRICAL BLOCK CHECKING

Note :

1. CD Block basically constructed to operate with-out adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10M Ω im-pedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

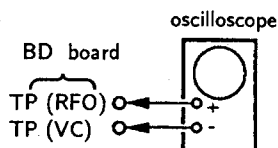
S Curve Check**Procedure :**

1. Connect oscilloscope to test point TP (FE) on BD board.
2. Connect between test point TP (FEI) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within $3 \pm 1V_{p-p}$.

S curve waveform

5. After check, remove the lead wire connected in step 2.

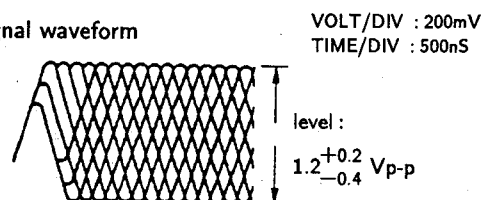
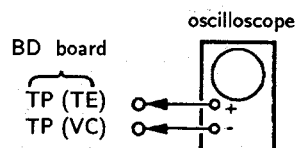
Note : • Try to mesure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check**Procedure :**

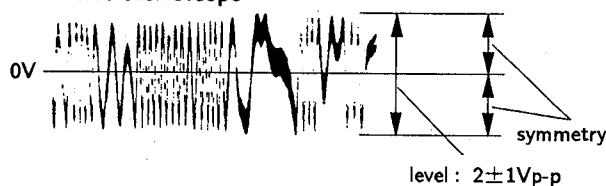
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

RF signal waveform**E-F Balance Check****Procedure :**

1. Connect test point TP (ADJ) to ground and TP (TEI) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TE) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is sym-metrical on the top and bottom in relation to 0V, and check this level.

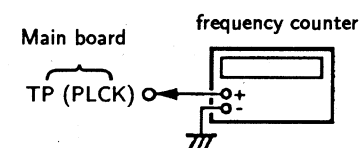
Traverse oscilloscope

6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

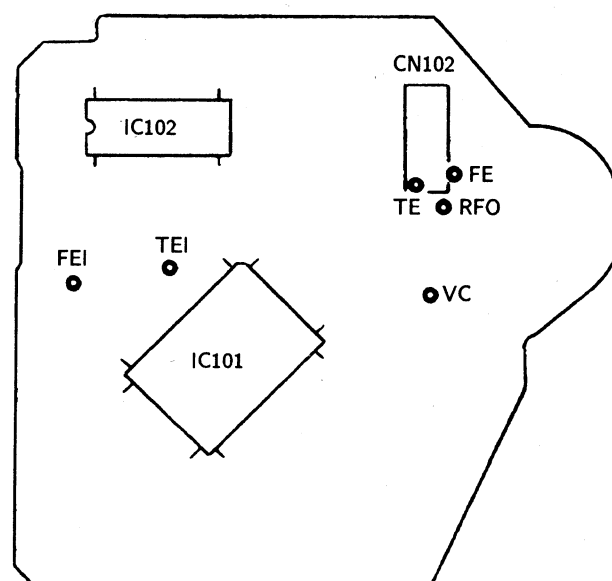
1. Connect frequency counter to test point (PLCK) with lead wire.
2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4.3218 MHz.



Adjustment Location :

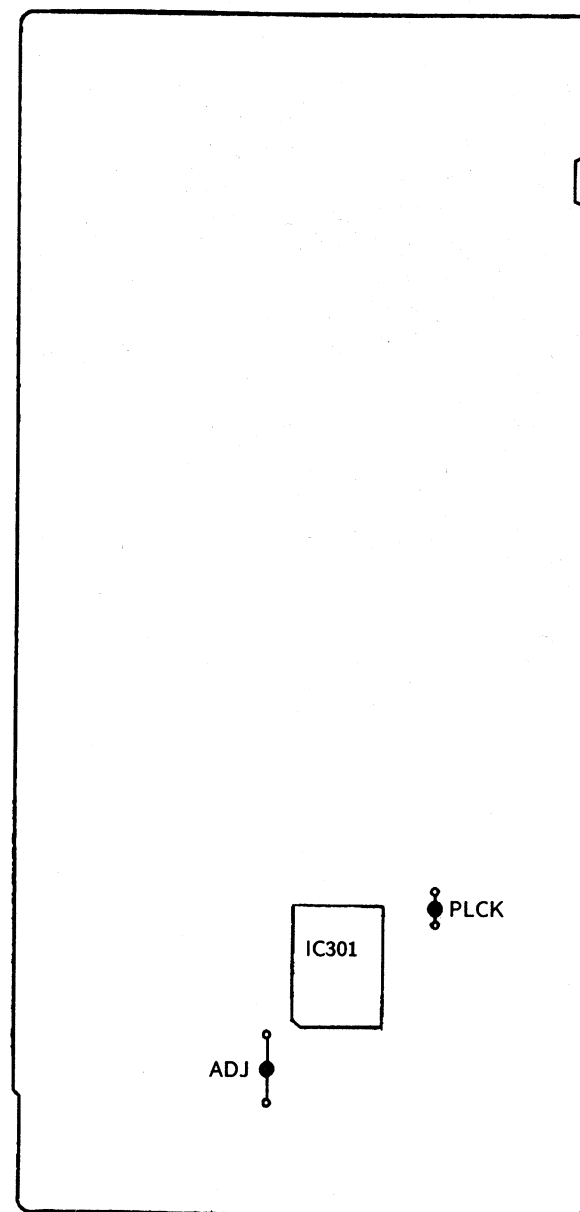
【BD BOARD】

- Solder side -



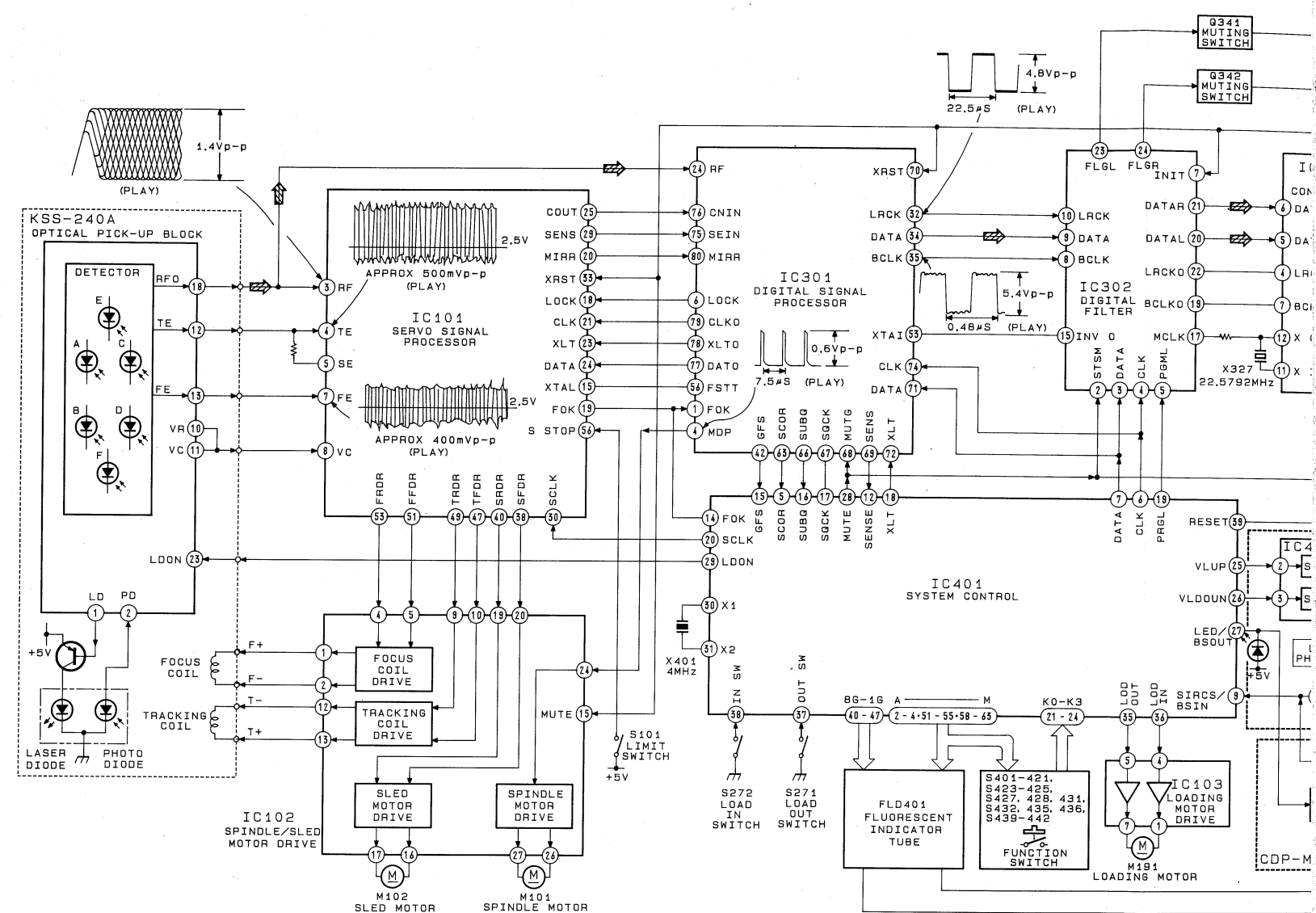
【MAIN BOARD】

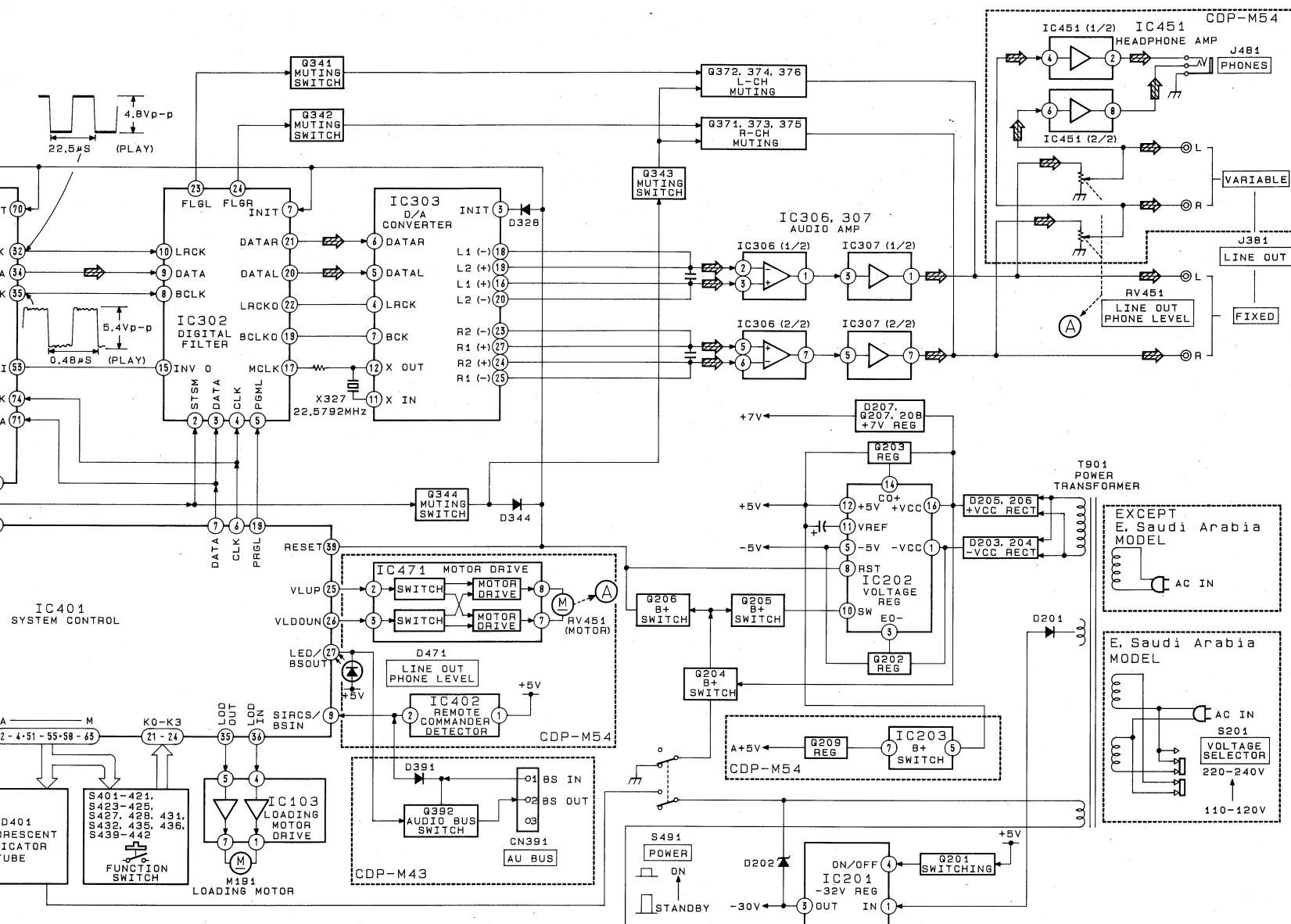
- Component side -



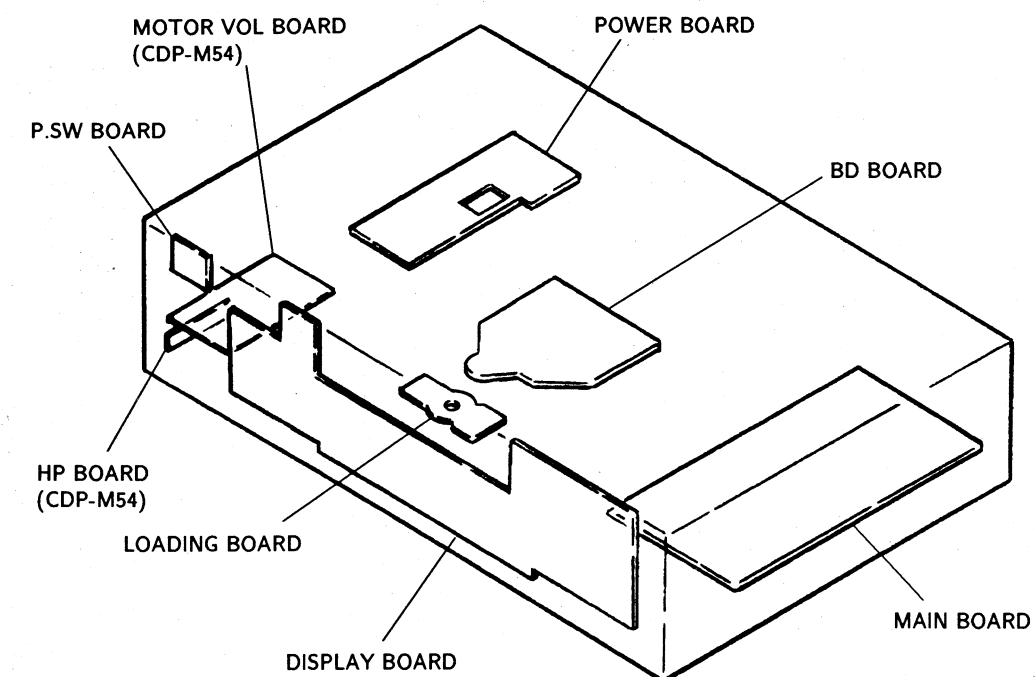
SECTION 4 DIAGRAMS

4-1 BLOCK DIAGRAM

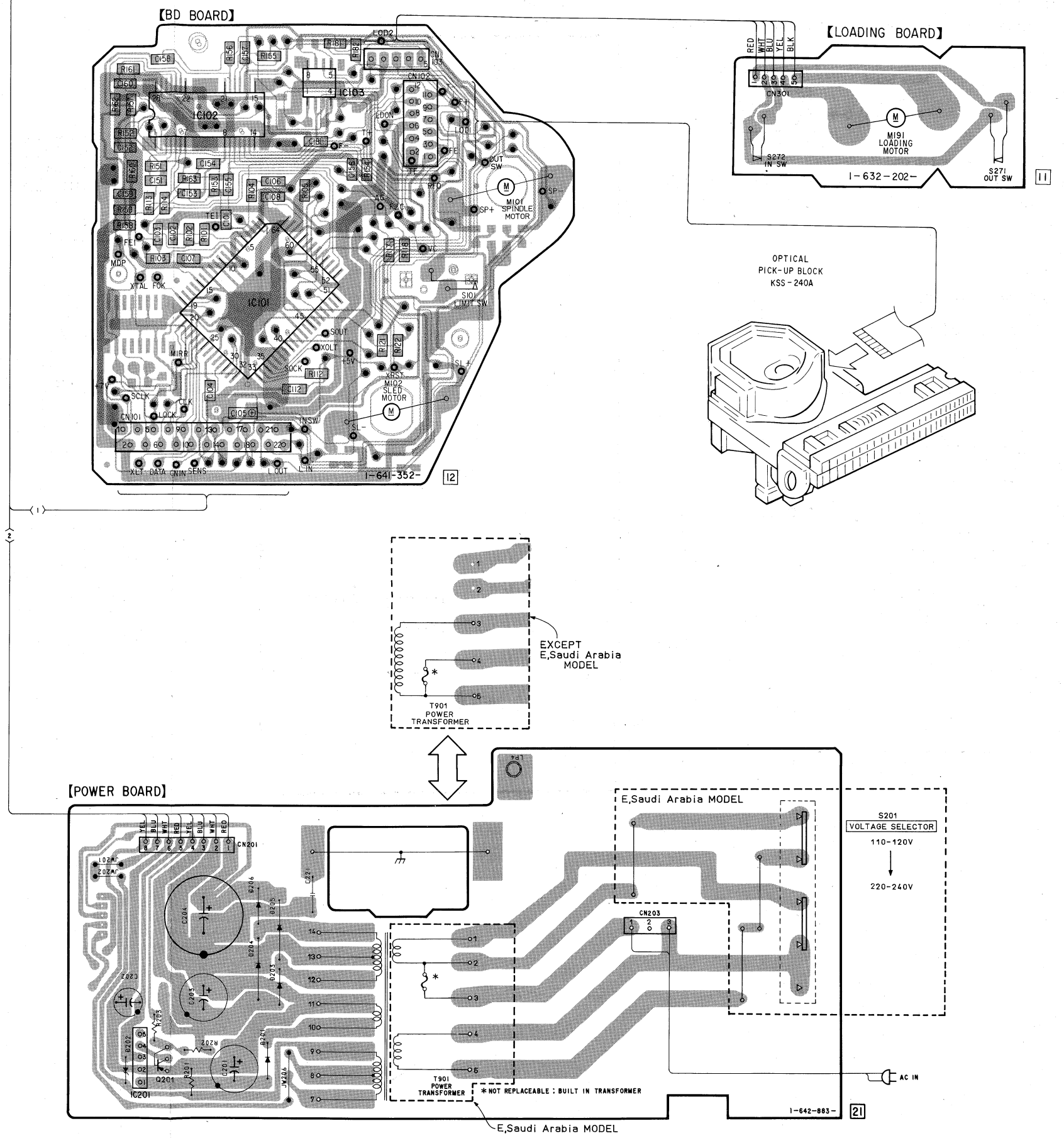
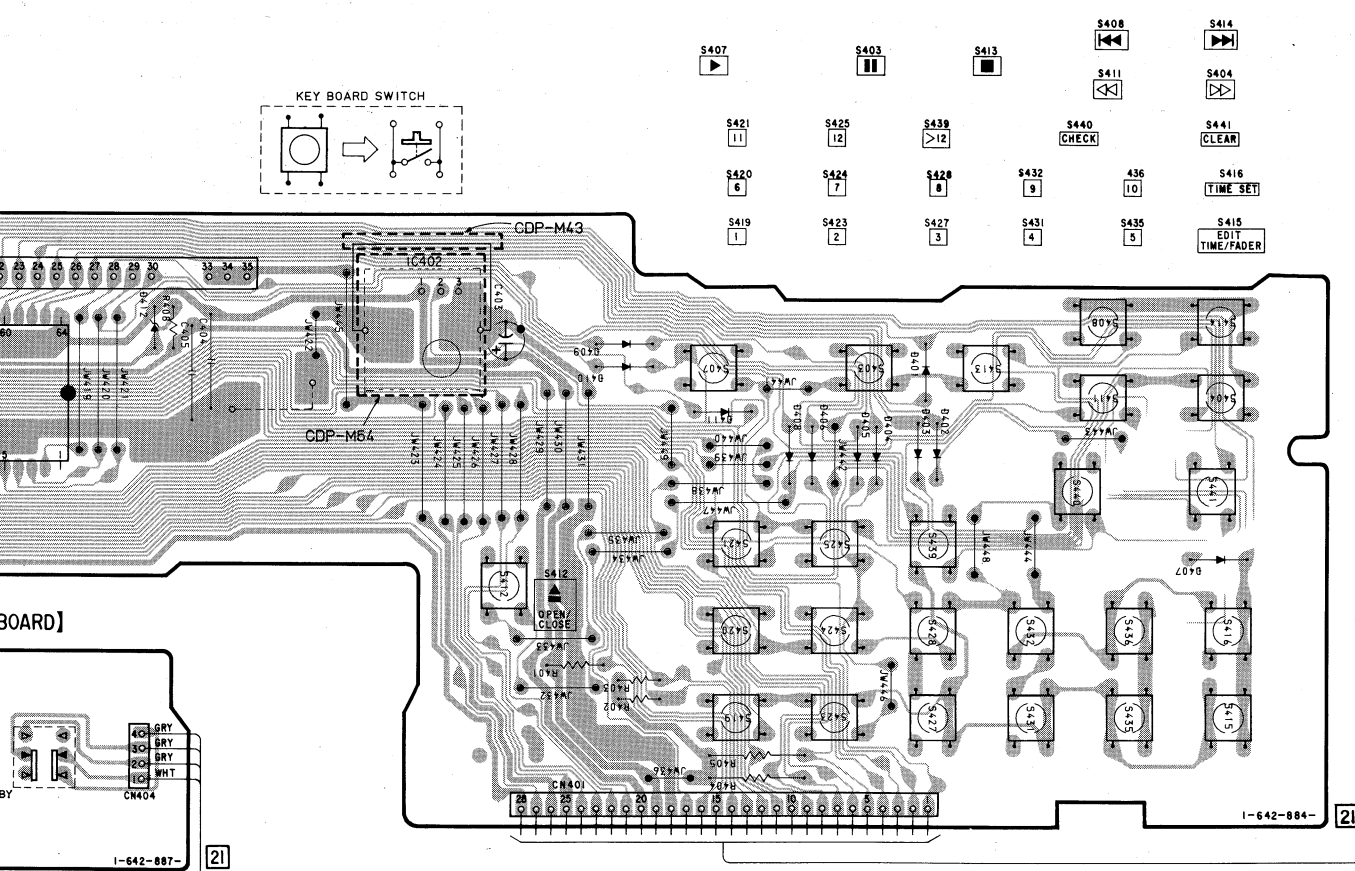




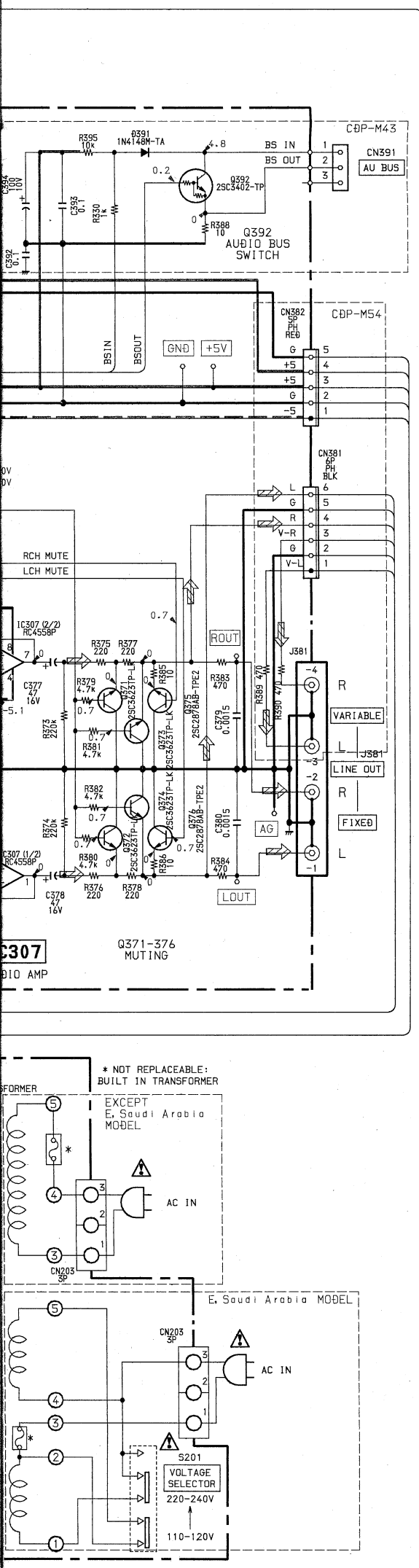
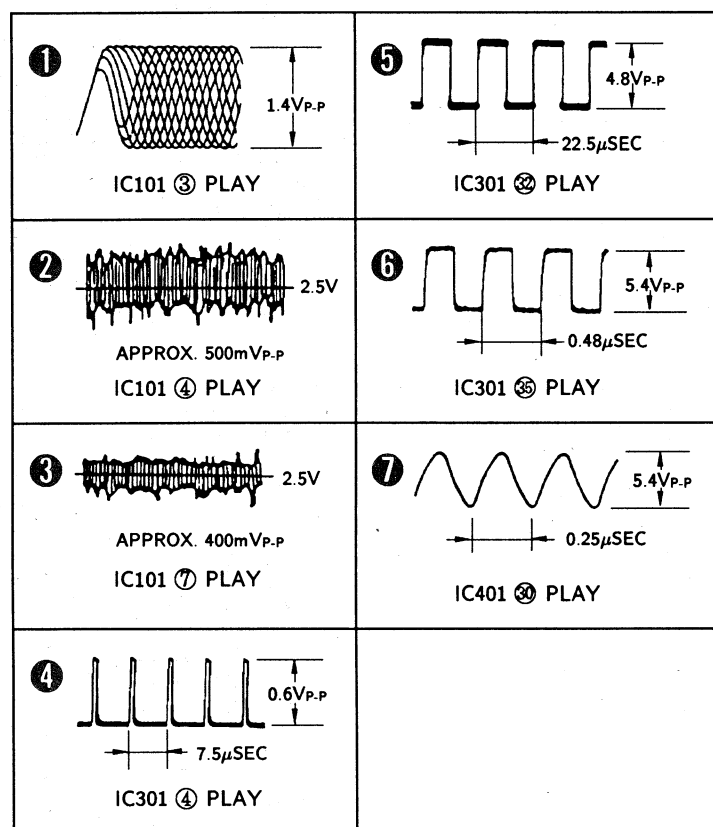
4-2 CIRCUIT BOARDS LOCATION

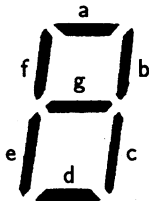
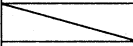
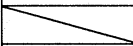

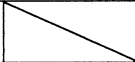

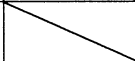


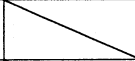
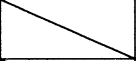
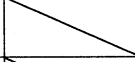
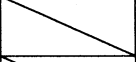

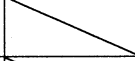
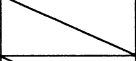

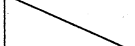

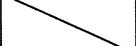


4-4 PRINTED WIRING BOARDS










**FLD401**

	8G	7G	6G	5G	4G	3G	2G	1G	
a							1	3	
b							2	4	
c									5
d									6
e							7	9	
f									10
g									
h			PEAK	MIN	STEP	SEC	11	13	
i			-	•			12	14	
j	SHUFFLE		JUST	EDIT		TIME		15	
k	PROGRAM		A. CUE	A			16	18	
l	REPEAT		LINK	B			17	19	
m	1		A. SPACE			FADE		20	

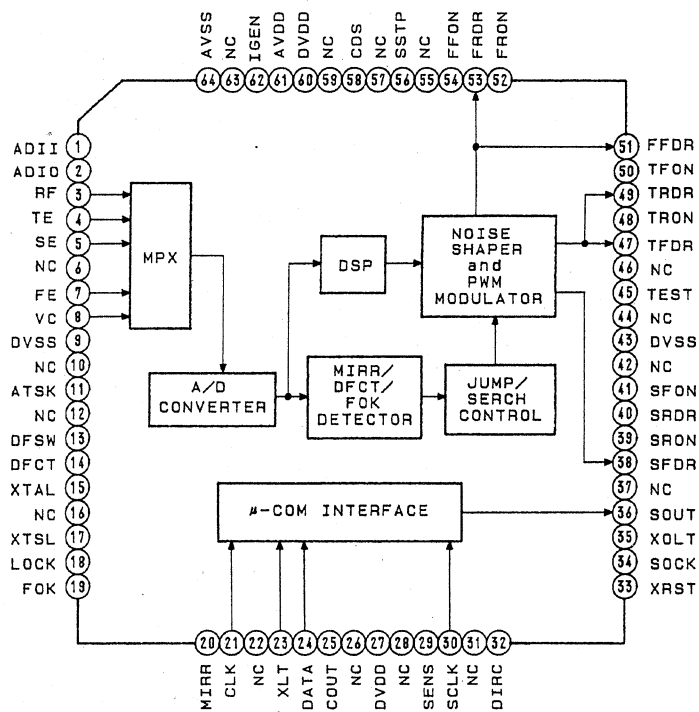
Note :

- All capacitors are in μF unless otherwise noted. $\text{pF} : \mu\text{F}$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- Δ : internal component.

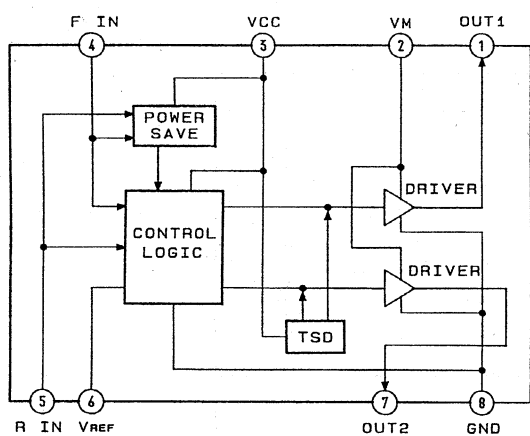
Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

-  : B + Line
-  : B - Line
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : STOP
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
-  : CD

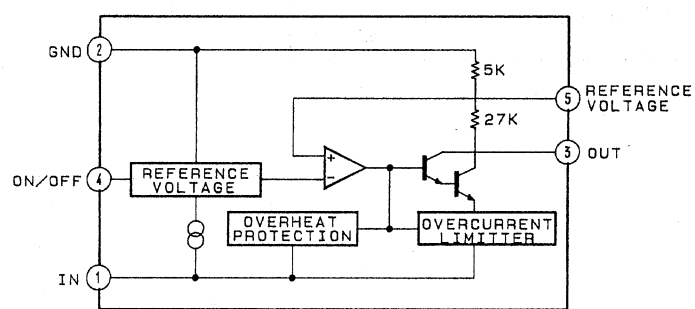
IC101 CXD2501



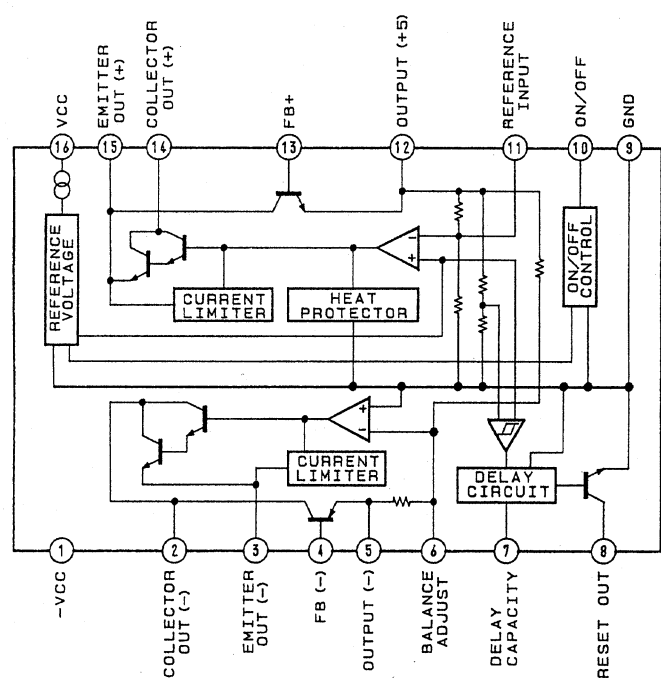
IC103 BA6287F



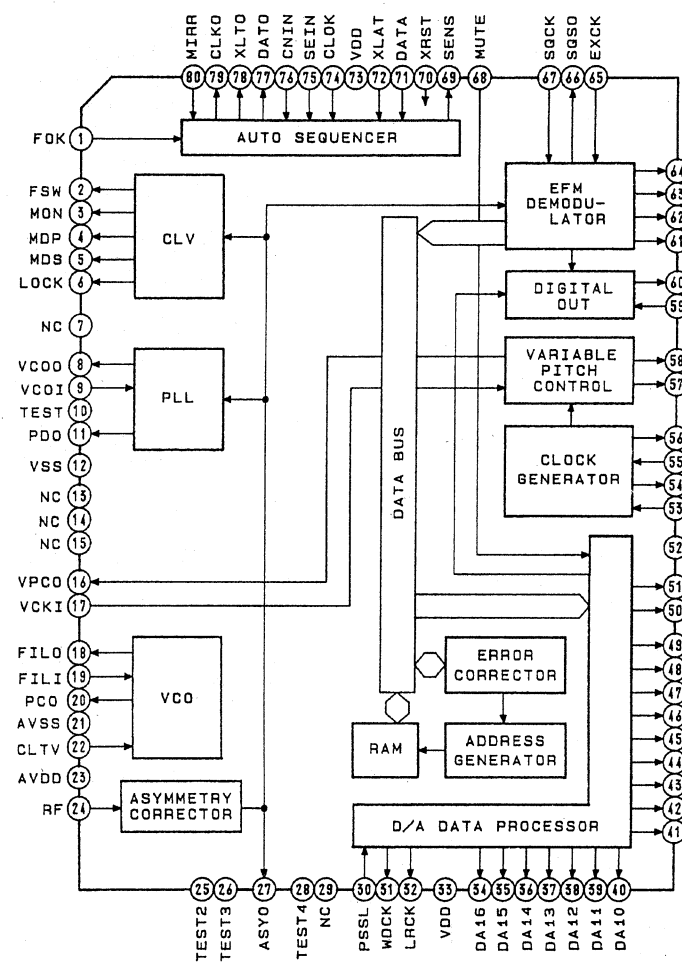
IC201 M5293L



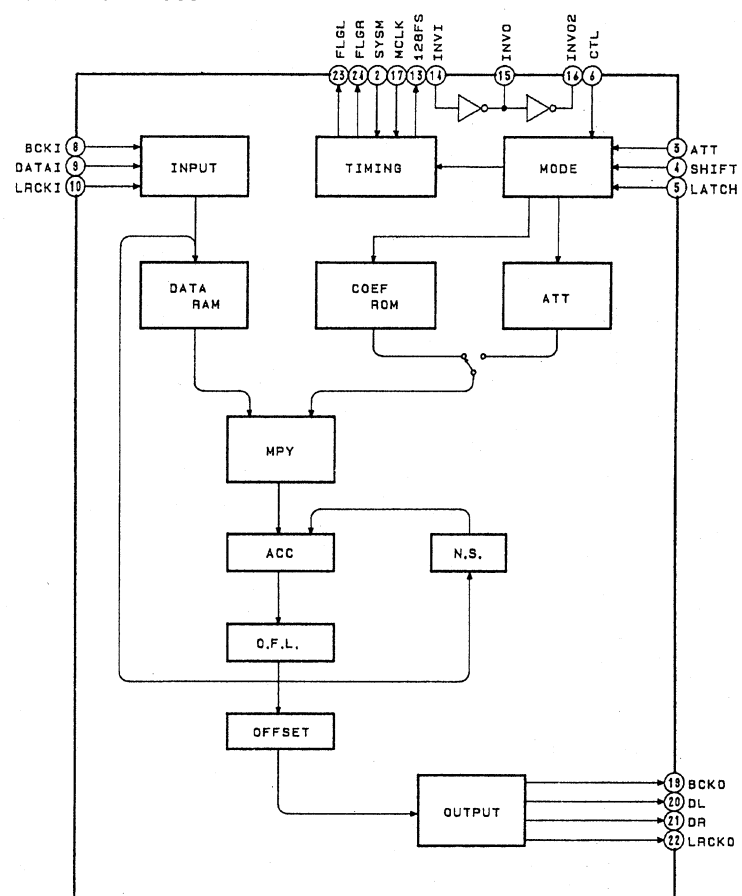
IC202 M5290P-16



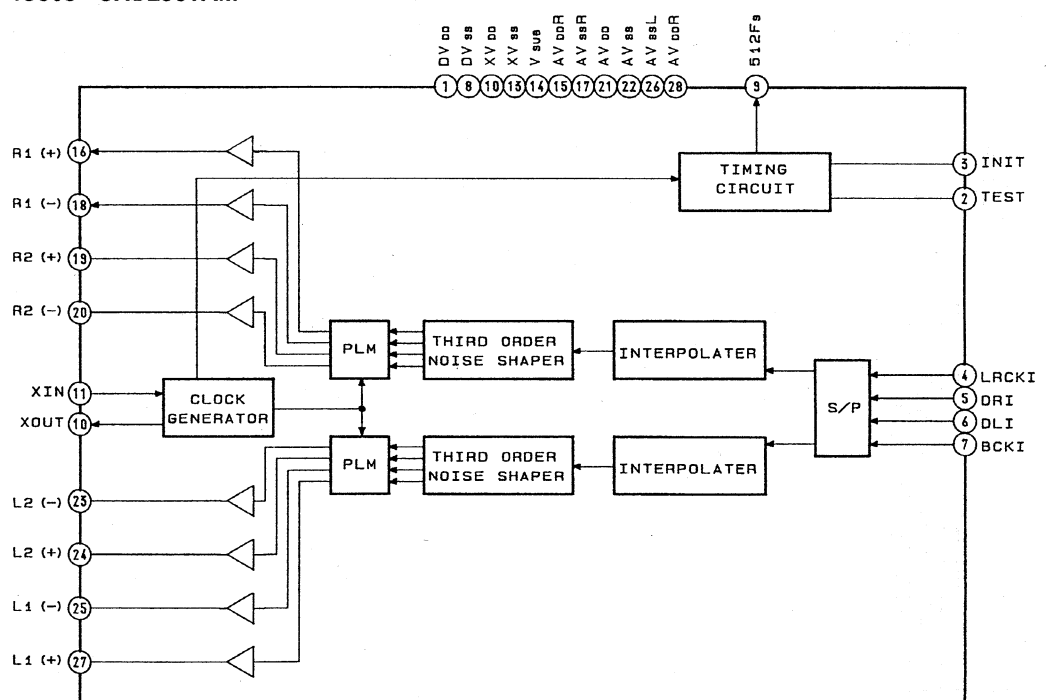
IC301 CXD2500AQ



IC302 CXD2560M



IC303 CXD2561AM



SECTION 5 EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE)....(RED)

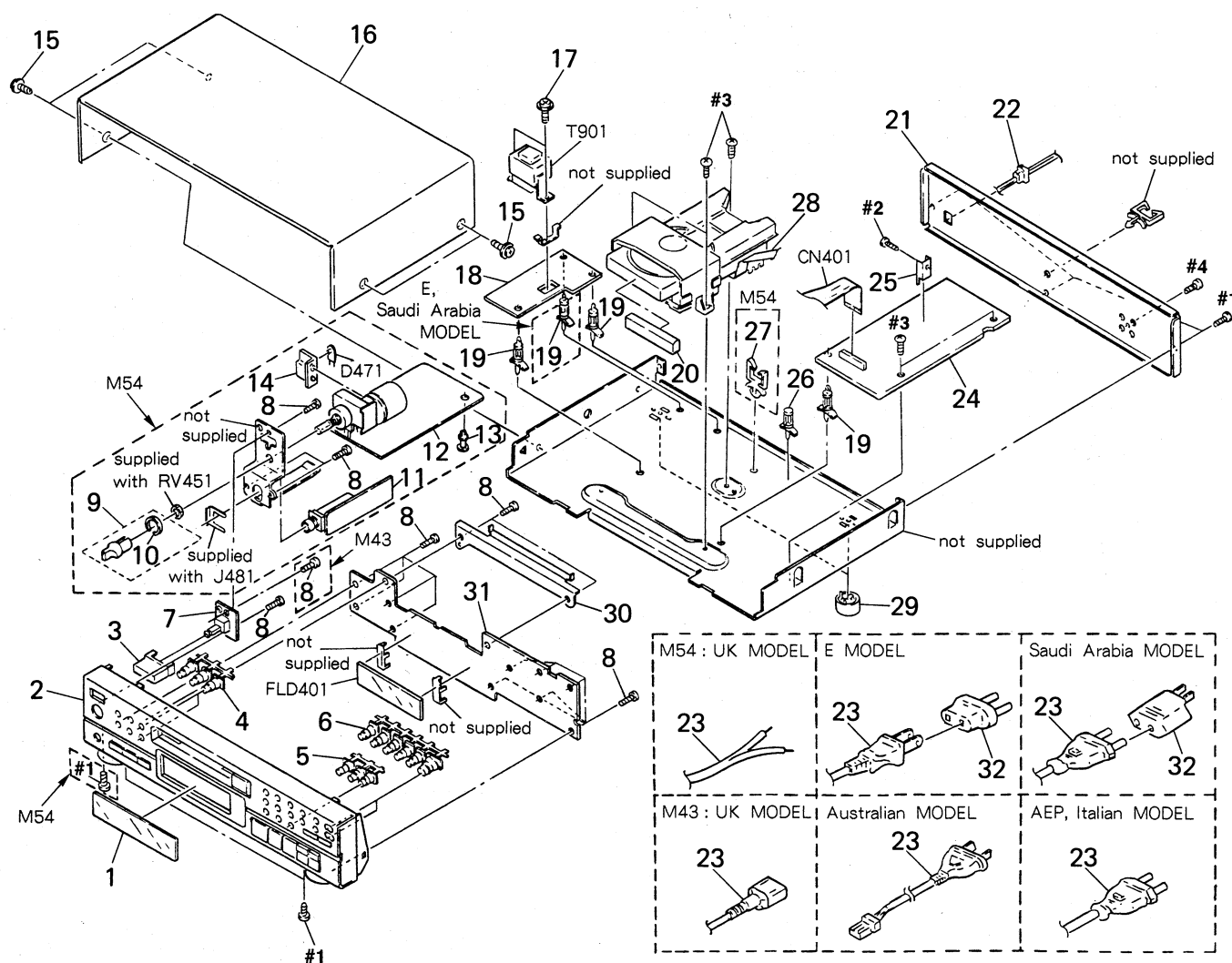
Parts color Cabinet's color

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark **A** or dotted line with mark **A** are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

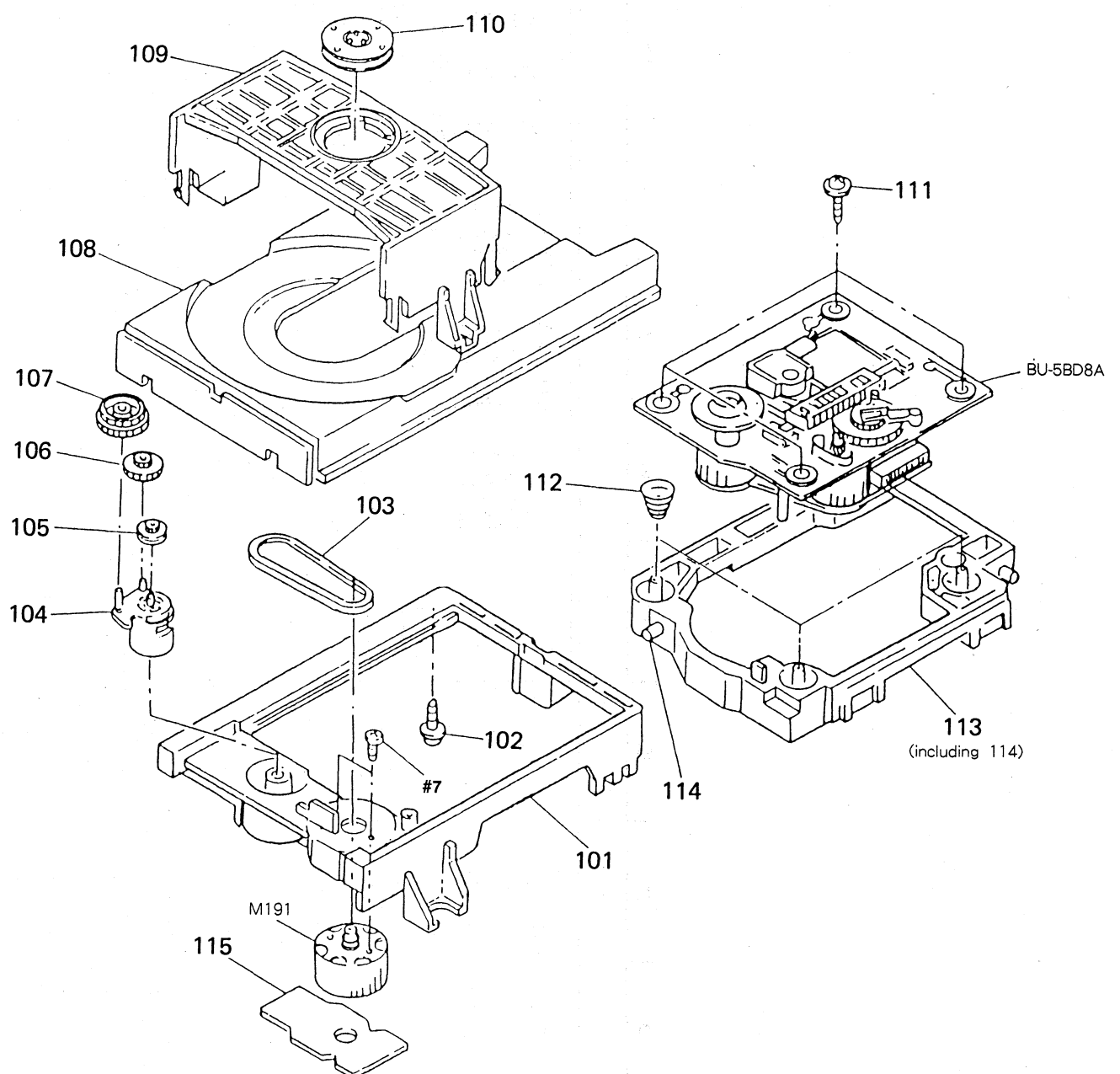
5-1 CABINET SECTION



Ref. No.	Part No.	Description	Remark
1	4-950-182-01	PLATE, INDICATION (M54)	
1	4-950-182-11	PLATE, INDICATION (M43)	
2	X-4942-345-1	PANEL ASSY, FRONT (BLACK) (M54)	
2	X-4942-346-1	PANEL ASSY, FRONT (GRAY) (EXCEPT M54/M43:Italian)	
2	X-4942-347-1	PANEL ASSY, FRONT (BLACK) (M43:Italian)	
3	4-950-176-01	BUTTON (POWER) (GRAY) (EXCEPT M54/M43:Italian)	
3	4-950-176-11	BUTTON (POWER) (BLACK) (M54/M43:Italian)	
4	4-950-177-01	BUTTON (G) (GRAY) (EXCEPT M54/M43:Italian)	
4	4-950-177-11	BUTTON (G) (BLACK) (M54/M43:Italian)	
5	4-950-179-01	BUTTON (MC/B) (GRAY) (EXCEPT M54/M43:Italian)	
5	4-950-179-11	BUTTON (MC/B) (BLACK) (M54/M43:Italian)	
6	4-950-178-01	BUTTON (MC/A) (GRAY) (EXCEPT M54/M43:Italian)	
6	4-950-178-11	BUTTON (MC/A) (BLACK) (M54/M43:Italian)	
* 7	1-642-887-21	P. SW BOARD	
8	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
9	A-4604-901-A	KNOB (HP) ASSY (M54)	
10	4-948-469-01	SPRING, RING (M54)	
11	1-642-886-21	HP BOARD (M54)	
* 12	A-4649-107-A	MOTOR VOL BOARD, COMPLETE (M54)	
* 13	3-676-567-00	SPACER (M54:E, AEP)	
* 14	4-922-980-01	HOLDER (LED) (M54)	
15	3-363-099-01	SCREW (CASE +3X8 TP2) (MADE IN FRANCE)	
15	3-704-366-01	SCREW (CASE) (M3X8) (MADE IN JAPAN)	
16	4-919-376-31	CASE (BLACK) (M54/M43:Italian)	
16	4-919-376-81	CASE (GRAY) (EXCEPT M54/M43:Italian)	
17	4-886-821-11	SCREW, S TIGHT, +PTTWH 3X6	
* 18	1-642-883-21	POWER BOARD	
* 19	4-924-098-31	HOLDER, PC BOARD	
20	4-950-174-01	PANEL, LOADING (GRAY) (EXCEPT M54/M43:Italian)	
20	4-950-174-11	PANEL, LOADING (BLACK) (M54)	
20	4-950-174-21	PANEL, LOADING (BLACK) (M43:Italian)	

5-2 MD SECTION (CDM14-5BD8A)

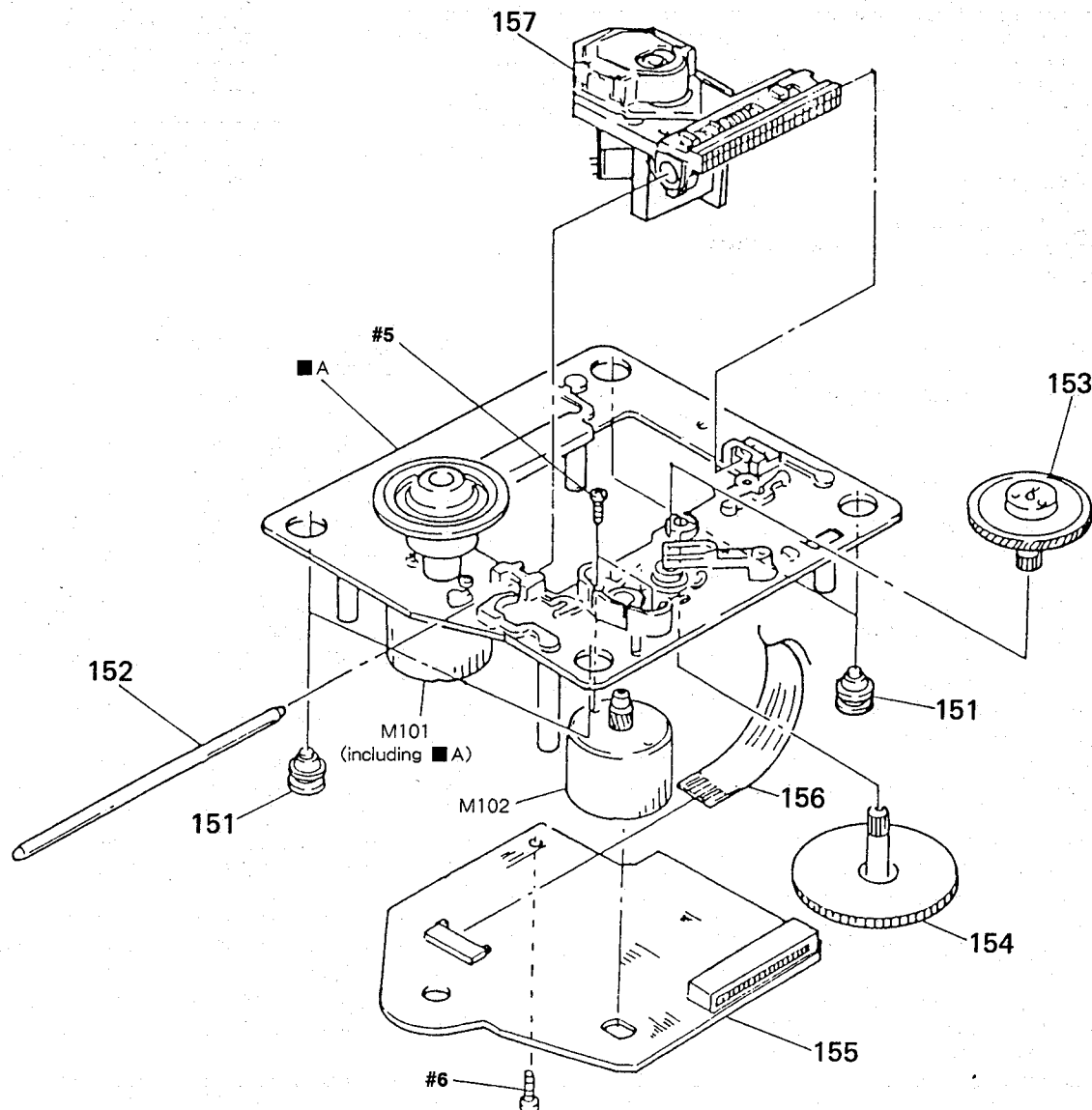
Ref. No.	Part No.	Description	Remark
* 21	4-941-467-11	PANEL (ALSACE), BACK (MADE IN FRANCE M43:AEP, Italian, UK)	
21	4-941-552-21	PANEL (ALSACE), BACK (MADE IN JAPAN M54:AEP, UK)	
* 21	4-949-433-01	PANEL, BACK (MADE IN JAPAN M54:AEP)	
* 21	4-949-433-22	PANEL, BACK (M54:E)	
* 21	4-949-433-41	PANEL, BACK (MADE IN FRANCE M43:AEP)	
* 21	4-949-433-51	PANEL, BACK (M43:E, Saudi Arabia)	
* 21	4-949-433-61	PANEL, BACK (M43:Australian)	
* 22	3-703-244-00	BUSHING (2104), CORD (EXCEPT E)	
* 22	3-703-571-11	BUSHING (S) (4516), CORD (E)	
A23	1-558-946-21	CORD, POWER (M54:UK)	
A23	1-574-358-31	CORD, POWER (WITH CONNECTOR) (Australian)	
A23	1-575-651-21	CORD, POWER (AEP, Italian, Saudi Arabia)	
A23	1-575-653-21	CORD, POWER (E)	
A23	1-590-379-11	CORD, POWER (M43:UK)	
* 24	A-4649-105-A	MAIN BOARD, COMPLETE (M54)	
* 24	A-4649-111-A	MAIN BOARD, COMPLETE (M43)	
* 25	4-941-237-01	HEAT SINK (M54:UK)	
25	4-902-345-01	HEAT SINK (EXCEPT M54:UK)	
* 26	3-349-025-41	HOLDER, PC BOARD	
* 27	4-314-320-00	HOLDER, WIRE (M54)	
28	1-575-160-11	WIRE, FLAT TYPE (22 CORE)	
29	4-931-169-01	FOOT	
30	4-950-180-01	REINFORCEMENT (MD)	
* 31	A-4649-104-A	DISP BOARD, COMPLETE (M54)	
* 31	A-4649-110-A	DISP BOARD, COMPLETE (M43)	
A32	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
A32	1-569-008-11	ADAPTER, CONVERSION 2P (Saudi Arabia)	
CN401	1-535-987-11	JAMPER, FILM (WITH TERMINAL)	
D471	8-719-970-49	DIODE BR4361F (M54)	
AT901	1-449-922-11	TRANSFORMER, POWER (EXCEPT E, Saudi Arabia)	
AT901	1-449-923-11	TRANSFORMER, POWER (E, Saudi Arabia)	



Ref. No.	Part No.	Description	Remark
101	4-933-111-01	CHASSIS (MD) (MADE IN JAPAN)	
101	4-933-111-11	CHASSIS (MD) (MADE IN FRANCE)	
* 102	4-917-583-21	BRACKET, YOKE	
103	4-927-649-01	BELT	
104	4-933-109-01	CAM	
105	4-927-651-01	PULLEY (S)	
106	4-927-628-01	GEAR (C)	
107	4-933-107-01	GEAR (PL)	
108	4-948-894-01	TABLE (ALS), DISK (MADE IN FRANCE)	
108	4-949-336-01	TABLE, DISK (MADE IN JAPAN)	

Ref. No.	Part No.	Description	Remark
109	4-933-110-01	HOLDER (MG)	
* 110	1-452-538-11	MAGNET	
111	4-933-134-01	SCREW (+PTPH M2. 6X6)	
112	4-917-541-01	SPRING (B) (MADE IN FRANCE)	
112	4-948-503-01	SPRING (BU), COMPRESSION (MADE IN JAPAN)	
113	4-933-129-01	HOLDER (BU)	
114	4-933-108-01	SHAFT (CAM)	
* 115	1-632-202-11	LOADING BOARD	
M191	A-4604-363-A	MOTOR (L) ASSY	

5-3 OPTICAL PICK-UP BLOCK (BU-55BD8A)



Note: The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
151	4-933-126-01	INSULATOR (A)	
152	4-917-565-01	SHAFT, SLED	
153	4-917-567-01	GEAR (M)	
154	4-917-564-01	GEAR (P), FLATNESS	
* 155	A-4617-977-A	BD BOARD, COMPLETE	
156	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
\triangle 157	8-848-144-11	DEVICE, OPTICAL KSS-240A	
M101	X-4917-523-3	BASE (OUTSERT) ASSY	
M102	X-4917-504-1	MOTOR ASSY	

BD

SECTION 6

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal oxide-film resistor
F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

● SEMICONDUCTORS

In each case, u: μ , for example:uA.....: μ A....., uPA.....: μ PA.....uPB.....: μ PB....., uPC.....: μ PC.....uPD.....: μ PD.....

● CAPACITORS

uF: μ F

● COILS

uH: μ H

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
*	A-4617-977-A	BD BOARD, COMPLETE	

< CAPACITOR >

C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C102	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C104	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C105	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C108	1-164-346-11	CERAMIC CHIP	1uF		16V
C112	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C151	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C152	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C153	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C154	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C155	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C156	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C157	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C158	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C159	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C160	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C181	1-163-038-00	CERAMIC CHIP	0.1uF		25V

< CONNECTOR >

CN101	1-568-796-11	SOCKET, CONNECTOR 22P
CN102	1-568-795-11	SOCKET, CONNECTOR 12P
CN103	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P

< IC >

IC101	8-752-344-48	IC	CXD2501Q
IC102	8-759-071-80	IC	BA6297AFP
IC103	8-759-040-83	IC	BA6287F

Ref. No.	Part No.	Description	Remark
< RESISTOR >			

R101	1-216-077-00	METAL CHIP	15K	5%	1/10W
R102	1-216-097-00	METAL CHIP	100K	5%	1/10W
R103	1-216-077-00	METAL CHIP	15K	5%	1/10W
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W
R105	1-216-097-00	METAL CHIP	100K	5%	1/10W
R112	1-216-049-00	METAL CHIP	1K	5%	1/10W
R113	1-216-077-00	METAL CHIP	15K	5%	1/10W
R114	1-216-077-00	METAL CHIP	15K	5%	1/10W
R117	1-216-077-00	METAL CHIP	15K	5%	1/10W
R118	1-216-077-00	METAL CHIP	15K	5%	1/10W
R121	1-216-077-00	METAL CHIP	15K	5%	1/10W
R122	1-216-077-00	METAL CHIP	15K	5%	1/10W
R151	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R152	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R153	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R154	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R155	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R156	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R157	1-216-085-00	METAL CHIP	33K	5%	1/10W
R158	1-216-076-00	METAL CHIP	13K	5%	1/10W
R159	1-216-085-00	METAL CHIP	33K	5%	1/10W
R160	1-216-081-00	METAL CHIP	22K	5%	1/10W
R161	1-216-093-00	METAL CHIP	68K	5%	1/10W
R162	1-216-085-00	METAL CHIP	33K	5%	1/10W
R163	1-216-308-00	METAL CHIP	4.7	5%	1/10W
R181	1-216-021-00	METAL CHIP	68	5%	1/10W
R182	1-216-021-00	METAL CHIP	68	5%	1/10W

MAIN

Ref. No.	Part No.	Description	Remark
< CONNECTOR >			
* CN204	1-564-511-11	PLUG, CONNECTOR 8P	
* CN301	1-568-843-11	SOCKET, CONNECTOR 28P	
* CN302	1-568-822-11	SOCKET, CONNECTOR 22P	
* CN381	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P (M54)	
* CN382	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P (M54)	
* CN391	1-565-561-11	PIN, CONNECTOR 3P (AU BUS) (M43)	
< DIODE >			
D207	8-719-114-49	DIODE RD7.5JSB2	
D208	8-719-109-89	DIODE RD5.6ESB2	
D209	8-719-987-63	DIODE 1N4148M	
D328	8-719-987-63	DIODE 1N4148M	
D344	8-719-987-63	DIODE 1N4148M	
D391	8-719-987-63	DIODE 1N4148M (M43)	
< IC >			
IC202	8-759-630-21	IC M5290P-16	
IC203	8-759-945-58	IC RC4558P (M54)	
IC301	8-752-337-26	IC CXD2500AQ	
IC302	8-752-342-65	IC CXD2560M	
IC303	8-752-349-01	IC CXD2561AM	
IC306	8-759-503-91	IC TL082ACP (M54)	
IC306	8-759-945-58	IC RC4558P (M43)	
IC307	8-759-945-58	IC RC4558P	
< JACK >			
J381	1-569-442-11	JACK, PIN 2P (LINE OUT) (M43)	
* J381	1-569-443-11	JACK, PIN 4P (LINE OUT) (M54)	
< COIL >			
L301	1-408-403-00	INDUCTOR 3.3uH	
L321	1-408-403-00	INDUCTOR 3.3uH	
< TRANSISTOR >			
Q202	8-729-140-96	TRANSISTOR 2SD774-34	
Q203	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q204	8-729-900-65	TRANSISTOR DTA144ES	
Q205	8-729-900-89	TRANSISTOR DTC144ES	
Q206	8-729-900-89	TRANSISTOR DTC144ES	
Q207	8-729-230-45	TRANSISTOR 2SC2458-YGR	
Q208	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q209	8-729-281-52	TRANSISTOR 2SC1815-Y (M54)	
Q341	8-729-900-65	TRANSISTOR DTA144ES	
Q342	8-729-900-65	TRANSISTOR DTA144ES	
Q343	8-729-900-65	TRANSISTOR DTA144ES	
Q344	8-729-900-89	TRANSISTOR DTC144ES	
Q371	8-729-141-30	TRANSISTOR 2SC3623A-LK	

Ref. No.	Part No.	Description	Remark
Q372	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q373	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q374	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q375	8-729-231-55	TRANSISTOR 2SC2878-AB	
Q376	8-729-231-55	TRANSISTOR 2SC2878-AB	
Q392	8-729-900-80	TRANSISTOR DTC114ES (M43)	
< RESISTOR >			
R204	1-249-425-11	CARBON 4.7K 5% 1/4W	
R205	1-249-425-11	CARBON 4.7K 5% 1/4W	
R206	1-249-417-11	CARBON 1K 5% 1/4W	
R207	1-249-417-11	CARBON 1K 5% 1/4W	
R208	1-249-423-11	CARBON 3.3K 5% 1/4W	
R209	1-249-413-11	CARBON 470 5% 1/4W	
R210	1-249-429-11	CARBON 10K 5% 1/4W (M54)	
R211	1-249-410-11	CARBON 270 5% 1/4W (M54)	
R214	1-249-417-11	CARBON 1K 5% 1/4W	
R301	1-249-417-11	CARBON 1K 5% 1/4W	
R302	1-249-417-11	CARBON 1K 5% 1/4W	
R303	1-249-421-11	CARBON 2.2K 5% 1/4W	
R304	1-249-417-11	CARBON 1K 5% 1/4W	
R306	1-249-413-11	CARBON 470 5% 1/4W	
R309	1-249-405-11	CARBON 100 5% 1/4W	
R311	1-249-423-11	CARBON 3.3K 5% 1/4W	
R312	1-249-429-11	CARBON 10K 5% 1/4W	
R313	1-249-423-11	CARBON 3.3K 5% 1/4W	
R314	1-249-429-11	CARBON 10K 5% 1/4W	
R315	1-249-417-11	CARBON 1K 5% 1/4W	
R316	1-249-417-11	CARBON 1K 5% 1/4W	
R317	1-249-419-11	CARBON 1.5K 5% 1/4W	
R318	1-249-441-11	CARBON 100K 5% 1/4W	
R319	1-247-903-00	CARBON 1M 5% 1/4W	
R320	1-249-417-11	CARBON 1K 5% 1/4W	
R321	1-249-417-11	CARBON 1K 5% 1/4W	
R322	1-249-417-11	CARBON 1K 5% 1/4W	
R323	1-249-417-11	CARBON 1K 5% 1/4W	
R324	1-249-417-11	CARBON 1K 5% 1/4W	
R325	1-249-417-11	CARBON 1K 5% 1/4W	
R326	1-249-417-11	CARBON 1K 5% 1/4W	
R327	1-247-903-00	CARBON 1M 5% 1/4W	
R328	1-247-895-00	CARBON 470K 5% 1/4W	
R330	1-249-417-11	CARBON 1K 5% 1/4W (M43)	
R343	1-249-441-11	CARBON 100K 5% 1/4W	
R344	1-249-441-11	CARBON 100K 5% 1/4W	
R345	1-249-425-11	CARBON 4.7K 5% 1/4W	
R346	1-249-425-11	CARBON 4.7K 5% 1/4W	
R347	1-249-441-11	CARBON 100K 5% 1/4W	
R351	1-249-436-11	CARBON 39K 5% 1/4W	

MAIN

MOTOR VOL

Ref. No.	Part No.	Description	Remark		
R352	1-249-436-11	CARBON	39K	5%	1/4W
R353	1-249-436-11	CARBON	39K	5%	1/4W
R354	1-249-436-11	CARBON	39K	5%	1/4W
R355	1-249-436-11	CARBON	39K	5%	1/4W
R356	1-249-436-11	CARBON	39K	5%	1/4W
R357	1-249-436-11	CARBON	39K	5%	1/4W
R358	1-249-436-11	CARBON	39K	5%	1/4W
R361	1-249-431-11	CARBON	15K	5%	1/4W (M54)
R361	1-249-432-11	CARBON	18K	5%	1/4W (M43)
R362	1-249-431-11	CARBON	15K	5%	1/4W (M54)
R362	1-249-432-11	CARBON	18K	5%	1/4W (M43)
R363	1-249-431-11	CARBON	15K	5%	1/4W (M54)
R363	1-249-432-11	CARBON	18K	5%	1/4W (M43)
R364	1-249-431-11	CARBON	15K	5%	1/4W (M54)
R364	1-249-432-11	CARBON	18K	5%	1/4W (M43)
R365	1-249-438-11	CARBON	56K	5%	1/4W
R366	1-249-438-11	CARBON	56K	5%	1/4W
R367	1-249-438-11	CARBON	56K	5%	1/4W
R368	1-249-438-11	CARBON	56K	5%	1/4W
R369	1-249-419-11	CARBON	1.5K	5%	1/4W
R370	1-249-419-11	CARBON	1.5K	5%	1/4W
R371	1-249-419-11	CARBON	1.5K	5%	1/4W
R372	1-249-419-11	CARBON	1.5K	5%	1/4W
R373	1-247-887-00	CARBON	220K	5%	1/4W
R374	1-247-887-00	CARBON	220K	5%	1/4W
R375	1-249-409-11	CARBON	220	5%	1/4W
R376	1-249-409-11	CARBON	220	5%	1/4W
R377	1-249-409-11	CARBON	220	5%	1/4W
R378	1-249-409-11	CARBON	220	5%	1/4W
R379	1-249-425-11	CARBON	4.7K	5%	1/4W
R380	1-249-425-11	CARBON	4.7K	5%	1/4W
R381	1-249-425-11	CARBON	4.7K	5%	1/4W
R382	1-249-425-11	CARBON	4.7K	5%	1/4W
R383	1-249-413-11	CARBON	470	5%	1/4W
R384	1-249-413-11	CARBON	470	5%	1/4W
R385	1-249-393-11	CARBON	10	5%	1/4W
R386	1-249-393-11	CARBON	10	5%	1/4W
R388	1-249-393-11	CARBON	10	5%	1/4W (M43)
R389	1-249-413-11	CARBON	470	5%	1/4W (M54)
R390	1-249-413-11	CARBON	470	5%	1/4W (M54)
R395	1-249-429-11	CARBON	10K	5%	1/4W (M43)
R396	1-247-848-11	CARBON	5.1K	5%	1/4W
R397	1-247-848-11	CARBON	5.1K	5%	1/4W
R398	1-247-848-11	CARBON	5.1K	5%	1/4W
R399	1-247-848-11	CARBON	5.1K	5%	1/4W

Ref. No.	Part No.	Description	Remark		
< VIBRATOR >					
X327	1-579-314-11	VIBRATOR, CRYSTAL (22.5792MHz)			

*	A-4649-107-A	MOTOR VOL BOARD, COMPLETE (M54)	*****		
*	4-922-980-01	HOLDER (LED) (M54)			
< CAPACITOR >					
C451	1-124-443-00	ELECT	100uF	20%	10V (M54)
C452	1-124-443-00	ELECT	100uF	20%	10V (M54)
C471	1-124-443-00	ELECT	100uF	20%	10V (M54)
C472	1-124-768-11	ELECT	4.7uF	20%	50V (M54)
C473	1-164-159-11	CERAMIC	0.1uF		50V (M54)
< CONNECTOR >					
* CN451	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P (M54)			
* CN453	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P (M54)			
CN472	1-506-468-11	CONNECTOR 3P, MALE (M54)			
< DIODE >					
D471	8-719-970-49	DIODE BR4361F			
		LINE OUT PHONE LEVEL) (M54)			
< IC >					
IC451	8-759-981-89	IC RC4556S (M54)			
IC471	8-759-962-08	IC BA6208 (M54)			
< RESISTOR >					
R451	1-249-435-11	CARBON	33K	5%	1/4W (M54)
R452	1-249-435-11	CARBON	33K	5%	1/4W (M54)
R453	1-249-432-11	CARBON	18K	5%	1/4W (M54)
R454	1-249-432-11	CARBON	18K	5%	1/4W (M54)
R455	1-249-422-11	CARBON	2.7K	5%	1/4W (M54)
R456	1-249-422-11	CARBON	2.7K	5%	1/4W (M54)
R457	1-249-429-11	CARBON	10K	5%	1/4W (M54)
R458	1-249-429-11	CARBON	10K	5%	1/4W (M54)
R461	1-249-399-11	CARBON	33	5%	1/4W (M54)
R462	1-249-399-11	CARBON	33	5%	1/4W (M54)
R471	1-249-411-11	CARBON	330	5%	1/4W (M54)
R472	1-249-417-11	CARBON	1K	5%	1/4W (M54)
R473	1-249-417-11	CARBON	1K	5%	1/4W (M54)
< VARIABLE RESISTOR >					
RV451	1-241-810-11	RES, VAR, CARBON 10K/10K	(LINE OUT PHONE LEVEL) (M54)		

BD

DISP

HP

Ref.No.	Part No.	Description	Remark
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< SWITCH >

S101 1-572-085-11 SWITCH, LEAF (LIMIT SW)

* A-4649-104-A DISP BOARD, COMPLETE (M54)

* A-4649-110-A DISP BOARD, COMPLETE (M43)

< CAPACITOR >

C402	1-164-159-11	CERAMIC	0.1uF	50V
C403	1-126-154-11	ELECT	47uF	20% 6.3V
C404	1-161-494-00	CERAMIC	0.022uF	25V
C405	1-164-159-11	CERAMIC	0.1uF	50V

< CONNECTOR >

CN401 1-535-987-11 JAMPER, FILM (WITH TERMINAL)

< DIODE >

D401	8-719-987-63	DIODE	1N4148M
D402	8-719-987-63	DIODE	1N4148M
D403	8-719-987-63	DIODE	1N4148M
D404	8-719-987-63	DIODE	1N4148M
D405	8-719-987-63	DIODE	1N4148M
D406	8-719-987-63	DIODE	1N4148M
D407	8-719-987-63	DIODE	1N4148M
D408	8-719-987-63	DIODE	1N4148M
D409	8-719-987-63	DIODE	1N4148M
D410	8-719-987-63	DIODE	1N4148M
D411	8-719-987-63	DIODE	1N4148M
D412	8-719-121-24	DIODE	RD9.1ESL

< FLUORESCENT INDICATOR >

FLD401 1-519-681-11 INDICATOR TUBE, FLUORESCENT

< IC >

IC401	8-759-061-40	IC	uPD75216ACW-C73 (M54)
IC401	8-759-070-44	IC	uPD75216ACW-C93 (M43)
IC402	8-741-100-48	IC	SBX1610-59 (M54)

< RESISTOR >

R401	1-249-435-11	CARBON	33K	5%	1/4W
R402	1-249-435-11	CARBON	33K	5%	1/4W
R403	1-249-435-11	CARBON	33K	5%	1/4W
R404	1-249-435-11	CARBON	33K	5%	1/4W
R405	1-249-435-11	CARBON	33K	5%	1/4W
R406	1-249-425-11	CARBON	4.7K	5%	1/4W
R407	1-249-425-11	CARBON	4.7K	5%	1/4W
R408	1-249-439-11	CARBON	68K	5%	1/4W

Ref.No.	Part No.	Description	Remark
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< SWITCH >

S401 1-554-303-21 SWITCH, TACTILE (CONTINUE)

S402 1-554-303-21 SWITCH, TACTILE (REPEAT)

S403 1-554-303-21 SWITCH, TACTILE (

S404 1-554-303-21 SWITCH, TACTILE (

S405 1-554-303-21 SWITCH, TACTILE (SHUFFLE)

S406 1-554-303-21 SWITCH, TACTILE (FADER)

S407 1-554-303-21 SWITCH, TACTILE (

S408 1-554-303-21 SWITCH, TACTILE (

S409 1-554-303-21 SWITCH, TACTILE (PROGRAM)

S410 1-554-303-21 SWITCH, TACTILE (TIME)

S411 1-554-303-21 SWITCH, TACTILE (

S412 1-554-303-21 SWITCH, TACTILE (OPEN/CLOSE)

S413 1-554-303-21 SWITCH, TACTILE (

S414 1-554-303-21 SWITCH, TACTILE (

S415 1-554-303-21 SWITCH, TACTILE (EDIT)

S416 1-554-303-21 SWITCH, TACTILE (TIME SET)

S417 1-554-303-21 SWITCH, TACTILE (PEAK SERCH)

S418 1-554-303-21 SWITCH, TACTILE (MUSIC SCAN)

S419 1-554-303-21 SWITCH, TACTILE (1)

S420 1-554-303-21 SWITCH, TACTILE (6)

S421 1-554-303-21 SWITCH, TACTILE (11)

S423 1-554-303-21 SWITCH, TACTILE (2)

S424 1-554-303-21 SWITCH, TACTILE (7)

S425 1-554-303-21 SWITCH, TACTILE (12)

S427 1-554-303-21 SWITCH, TACTILE (3)

S428 1-554-303-21 SWITCH, TACTILE (8)

S431 1-554-303-21 SWITCH, TACTILE (4)

S432 1-554-303-21 SWITCH, TACTILE (9)

S435 1-554-303-21 SWITCH, TACTILE (5)

S436 1-554-303-21 SWITCH, TACTILE (10)

S439 1-554-303-21 SWITCH, TACTILE (>12)

S440 1-554-303-21 SWITCH, TACTILE (CHECK)

S441 1-554-303-21 SWITCH, TACTILE (CLEAR)

S442 1-554-303-21 SWITCH, TACTILE (A. SPACE/A. CUE)

< VIBRATOR >

X401 1-577-358-21 VIBRATOR, CERAMIC (4MHz)

1-642-886-21 HP BOARD (M54)

< CAPACITOR >

C481	1-162-294-31	CERAMIC	0.001uF	10%	50V(M54)
C482	1-162-294-31	CERAMIC	0.001uF	10%	50V(M54)
C483	1-164-159-11	CERAMIC	0.1uF		50V(M54)

HP

LOADING

MAIN

Ref. No.	Part No.	Description	Remark			
< JACK >						
J481	1-568-519-41	JACK, LARGE TYPE (PHONES) (M54)				
< RESISTOR >						
R481	1-249-402-11	CARBON	56	5%	1/4W (M54)	
R482	1-249-402-11	CARBON	56	5%	1/4W (M54)	

*	1-632-202-11	LOADING BOARD				

< CONNECTOR >						
* CN301	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P				
< SWITCH >						
S271	1-572-086-11	SWITCH, LEAF (OUT SW)				
S272	1-572-086-11	SWITCH, LEAF (IN SW)				

*	A-4649-105-A	MAIN BOARD, COMPLETE (M54)				
*	A-4649-111-A	MAIN BOARD, COMPLETE (M43)				

	4-902-345-01	HEAT SINK (EXCEPT M54:UK)				
*	4-941-237-01	HEAT SINK (M54:UK)				
< CAPACITOR >						
C205	1-126-163-11	ELECT	4.7uF	20%	50V	
C206	1-126-059-11	ELECT	10uF	20%	50V	
C207	1-126-059-11	ELECT	10uF	20%	50V	
C208	1-124-997-11	ELECT	470uF	20%	10V	
C209	1-124-997-11	ELECT	470uF	20%	10V	
C210	1-126-024-11	ELECT	220uF	20%	16V	
C211	1-124-997-11	ELECT	470uF	20%	10V	
C212	1-164-159-11	CERAMIC	0.1uF		50V	
C213	1-126-012-11	ELECT	470uF	20%	16V	
C214	1-126-012-11	ELECT	470uF	20%	16V	
C301	1-126-022-11	ELECT	47uF	20%	16V	
C302	1-126-301-11	ELECT	1uF	20%	50V	
C305	1-126-022-11	ELECT	47uF	20%	16V	
C306	1-164-159-11	CERAMIC	0.1uF		50V	
C307	1-164-159-11	CERAMIC	0.1uF		50V	
C308	1-164-159-11	CERAMIC	0.1uF		50V	
C311	1-130-491-00	MYLAR	0.047uF	5%	50V	
C312	1-161-374-11	CERAMIC	0.0015uF	20%	50V	
C313	1-161-494-00	CERAMIC	0.022uF		25V	
C314	1-162-306-11	CERAMIC	0.01uF	20%	16V	

Ref. No.	Part No.	Description	Remark			
C315	1-126-300-11	ELECT	0.47uF	20%	50V	
C317	1-164-159-11	CERAMIC	0.1uF		50V	
C318	1-164-159-11	CERAMIC	0.1uF		50V (M43)	
C319	1-162-282-31	CERAMIC	100PF	10%	50V	
C320	1-130-483-00	MYLAR	0.01uF	5%	50V	
C321	1-162-208-31	CERAMIC	24PF	5%	50V	
C322	1-124-994-11	ELECT	100uF	20%	10V	
C324	1-164-159-11	CERAMIC	0.1uF		50V	
C325	1-162-205-31	CERAMIC	18PF	5%	50V	
C326	1-162-205-31	CERAMIC	18PF	5%	50V	
C327	1-164-159-11	CERAMIC	0.1uF		50V	
C328	1-126-024-11	ELECT	220uF	20%	16V	
C329	1-126-024-11	ELECT	220uF	20%	16V	
C330	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C331	1-164-159-11	CERAMIC	0.1uF		50V	
C332	1-164-159-11	CERAMIC	0.1uF		50V	
C333	1-164-159-11	CERAMIC	0.1uF		50V	
C335	1-164-159-11	CERAMIC	0.1uF		50V	
C351	1-126-022-11	ELECT	47uF	20%	16V	
C352	1-164-159-11	CERAMIC	0.1uF		50V	
C353	1-126-022-11	ELECT	47uF	20%	16V	
C354	1-164-159-11	CERAMIC	0.1uF		50V	
C355	1-126-022-11	ELECT	47uF	20%	16V	
C356	1-164-159-11	CERAMIC	0.1uF		50V	
C357	1-124-994-11	ELECT	100uF	20%	10V (M43)	
C357	1-124-997-11	ELECT	470uF	20%	10V (M54)	
C358	1-124-994-11	ELECT	100uF	20%	10V (M43)	
C358	1-124-997-11	ELECT	470uF	20%	10V (M54)	
C361	1-162-280-31	CERAMIC	82PF	10%	50V	
C362	1-162-280-31	CERAMIC	82PF	10%	50V	
C363	1-162-213-31	CERAMIC	39PF	5%	50V	
C364	1-162-213-31	CERAMIC	39PF	5%	50V	
C365	1-162-213-31	CERAMIC	39PF	5%	50V	
C366	1-162-213-31	CERAMIC	39PF	5%	50V	
C367	1-161-494-00	CERAMIC	0.022uF		25V	
C368	1-161-494-00	CERAMIC	0.022uF		25V	
C371	1-106-359-00	MYLAR	4700PF	5%	200V	
C372	1-106-359-00	MYLAR	4700PF	5%	200V	
C373	1-130-472-00	MYLAR	0.0012uF	5%	50V	
C374	1-130-472-00	MYLAR	0.0012uF	5%	50V	
C377	1-126-022-11	ELECT	47uF	20%	16V	
C378	1-126-022-11	ELECT	47uF	20%	16V	
C379	1-106-347-00	MYLAR	1500PF	5%	200V	
C380	1-106-347-00	MYLAR	1500PF	5%	200V	
C392	1-164-159-11	CERAMIC	0.1uF		50V (M43)	
C393	1-164-159-11	CERAMIC	0.1uF		50V (M43)	
C394	1-124-994-11	ELECT	100uF	20%	10V (M43)	

P. SW**POWER**

Ref. No.	Part No.	Description	Remark
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*	1-642-887-21	P.SW BOARD	
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< SWITCH >

S491	1-554-118-00	SWITCH, PUSH (1 KEY) (POWER)	
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*	1-642-883-21	POWER BOARD	
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< CAPACITOR >

C201	1-124-572-11	ELECT	100uF	20%	63V
C202	1-126-059-11	ELECT	10uF	20%	50V
C203	1-124-556-11	ELECT	2200uF	20%	16V
C204	1-126-937-11	ELECT	4700uF	20%	16V
C221	1-164-159-11	CERAMIC	0.1uF		50V

< CONNECTOR >

* CN201	1-564-511-11	PLUG, CONNECTOR 8P	
* CN203	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P	

< DIODE >

D201	8-719-200-02	DIODE	10E2 (M43:E, Saudi Arabia)
D201	8-719-200-82	DIODE	11ES2 (EXCEPT M54/M43:E, Saudi Arabia)

D202	8-719-110-03	DIODE	RD7.5ES-B2
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D203	8-719-200-02	DIODE	10E2 (M43:E, Saudi Arabia)
D203	8-719-200-82	DIODE	11ES2 (EXCEPT M54/M43:E, Saudi Arabia)

D204	8-719-200-02	DIODE	10E2 (M43:E, Saudi Arabia)
D204	8-719-200-82	DIODE	11ES2 (EXCEPT M54/M43:E, Saudi Arabia)

D205	8-719-200-02	DIODE	10E2 (M43:E, Saudi Arabia)
D205	8-719-200-82	DIODE	11ES2 (EXCEPT M54/M43:E, Saudi Arabia)

D206	8-719-200-02	DIODE	10E2 (M43:E, Saudi Arabia)
D206	8-719-200-82	DIODE	11ES2 (EXCEPT M54/M43:E, Saudi Arabia)

< IC >

IC201	8-759-633-42	IC	M5293L
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< TRANSISTOR >

Q201	8-729-119-76	TRANSISTOR	2SA1175-HFE
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Ref. No.	Part No.	Description	Remark
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< RESISTOR >

R201	1-249-435-11	CARBON	33K 5% 1/4W
R202	1-249-438-11	CARBON	56K 5% 1/4W
R203	1-249-429-11	CARBON	10K 5% 1/4W

< SWITCH >

AS201	1-571-722-11	SWITCH, VOLTAGE SELECTION	(E, Saudi Arabia)
-------	--------------	---------------------------	-------------------

MISCELLANEOUS

A23	1-558-946-21	CORD, POWER (M54:UK)
A23	1-574-358-31	CORD, POWER (WITH CONNECTOR) (Australian)
A23	1-575-651-21	CORD, POWER (AEP, Italian, Saudi Arabia)
A23	1-575-653-21	CORD, POWER (E)
A23	1-590-379-11	CORD, POWER (M43:UK)

28	1-575-160-11	WIRE, FLAT TYPE (22 CORE)
----	--------------	---------------------------

A32	1-569-007-11	ADAPTER, CONVERSION 2P (E)
A32	1-569-008-11	ADAPTER, CONVERSION 2P (Saudi Arabia)

* 110	1-452-538-11	MAGNET
156	1-575-001-11	WIRE, FLAT TYPE (12 CORE)
A157	8-848-144-11	DEVICE, OPTICAL KSS-240A
D471	8-719-970-49	DIODE BR4361F (M54)

M101	X-4917-523-3	BASE (OUTSERT) ASSY
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M102	X-4917-504-1	MOTOR ASSY
------	--------------	------------

M191	A-4604-363-A	MOTOR (L) ASSY
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AT901	1-449-922-11	TRANSFORMER, POWER
		(EXCEPT E, Saudi Arabia)

AT901	1-449-923-11	TRANSFORMER, POWER (E, Saudi Arabia)
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Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
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ACCESSORIES & PACKING MATERIALS

1-465-867-11 REMOTE COMMANDER (RM-D597) (M54)
1-558-271-11 CORD, CONNECTION (MADE IN FRANCE)
1-559-533-11 CORD, CONNECTION (MADE IN JAPAN)
2-181-754-01 COVER, BATTERY (M54)

3-754-665-11 MANUAL, INSTRUCTION (English/French
Spanish/Portuguese) (M54:AEP, E, UK)
3-754-665-41 MANUAL, INSTRUCTION (Dutch/German
Italian/Swedish) (M54:AEP)

* 4-922-998-01 CUSHION (MADE IN JAPAN)
* 4-927-355-03 CUSHION (MADE IN FRANCE)

* 4-948-882-31 INDIVIDUAL CARTON
(MADE IN FRANCE M43:AEP, Italian, UK)
* 4-948-882-41 INDIVIDUAL CARTON
(MADE IN FRANCE M54:AEP, UK)
* 4-949-971-21 INDIVIDUAL CARTON
(MADE IN JAPAN M43:AEP, Australian)
* 4-949-971-41 INDIVIDUAL CARTON
(MADE IN JAPAN M54:E, AEP)

HARDWARE LIST

#1 17-682-548-09 SCREW +BVTT 3X8 (S)
#2 27-682-547-09 SCREW +B 3X6
#3 37-682-547-04 SCREW +BVTT 3X6 (S)
#4 47-685-646-79 SCREW +BVTP 3X8 TYPE2 N-S
#5 57-621-255-15 SCREW +P 2X3
#6 67-685-134-19 SCREW +BTP 2.6X8 TYPE2 N-S
#7 77-621-775-10 SCREW +B 2.6X4

TC-D509

SERVICE MANUAL

- TC-D509 is deck section in LBT-A57CD/A57CDM/D509CD.

*AEP Model
UK Model
E Model
Australian Model*

TC-D509 is based on model TC-D507.

As only difference parts of TC-D507 in this service manual.

Refer to TC-D507 service manual previously issued for the other information.

DIFFERENCE PARTS LIST

TC-D507 service manual				TC-D509
Page	Ref. No.	Description	Part No. (Destination)	Part No.
19	1	LID (A) ASSY, CASSETTE	X-3364-710-1 (except for IT) X-3364-711-1 (IT)	X-3364-710-1
	2	LID (B) ASSY, CASSETTE	X-3364-712-1 (except for IT) X-3364-713-1 (IT)	X-3366-399-1
	5	CASE	*4-939-803-31 (except for IT) *4-939-803-71 (IT)	*4-939-803-31
	6	PANEL, BACK	*3-377-136-11 (except for G) *3-377-136-21 (G)	*3-387-099-01 (except for G) *3-387-099-12 (G)
20	51	PANEL ASSY, FRONT	X-3364-706-1 (except for IT) X-3364-707-1 (IT)	X-3364-706-1
	56	KNOB (SLIDE)	*3-377-110-01 (except for IT) *3-377-110-11 (IT)	*3-377-110-01

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

STEREO CASSETTE DECK
SONY®


TC-D507

SERVICE MANUAL

*AEP Model
UK Model
E Model
Australian Model
East European Model*



• This set is the deck section in LBT-D507/D507CD/D507CDM.

Dolby noise reduction manufactured under license from
Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol  are trademarks of
Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	TC-H1600
Tape Transport Mechanism Type	DECK A : TCM-190RA12C DECK B : TCM-190RB22C

SPECIFICATIONS

Recording system	4-track 2-channel stereo
Frequency response	DOLBY NR OFF With Type IV cassette (Sony METAL-ES) 30 Hz to 15 kHz (± 3 dB) With Type II cassette (Sony UX-S) 40 Hz to 14 kHz (± 3 dB) With Type I cassette (Sony HF-S) 40 Hz to 14 kHz (± 3 dB)
Wow and flutter	± 0.2 % (DIN)
Weight	Approx. 3.4 kg
Dimensions	Approx. 355 \times 131 \times 304 mm (w/h/d, including projections)

Design and specifications are subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding
interference suppression.



CASSETTE DECK
SONY[®]

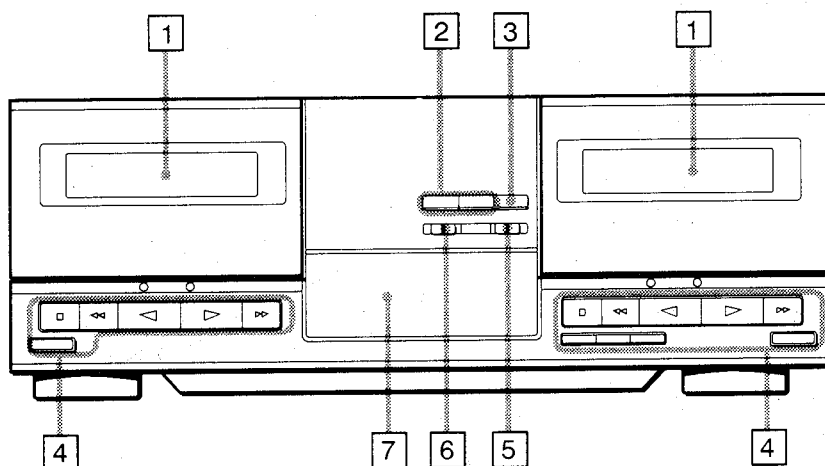
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SECTION 1 GENERAL

Location of Controls

This section is extracted
from instruction manual.



- 1 Cassette holders
- 2 SYNCHRO DUBBING buttons (44)
- 3 CD SYNCHRO button (48)
- 4 Tape operation buttons
 - ◀◀ Leftward fast winding/AMS*,
 - ▶▶ Rightward fast winding/AMS*,
 - ▶ Forward play, ◀ Reverse play,
 - Stop, ▲ Eject, || Pause (deck B only),
 - Record muting (deck B only),
 - Record (deck B only)
- 5 DOLBY NR (noise reduction) switch (36)
- 6 DIRECTION MODE selector (32, 36, 44, 48)
- 7 Display window

* AMS is the abbreviation of Automatic Music Sensor.

SECTION 2 DISASSEMBLY

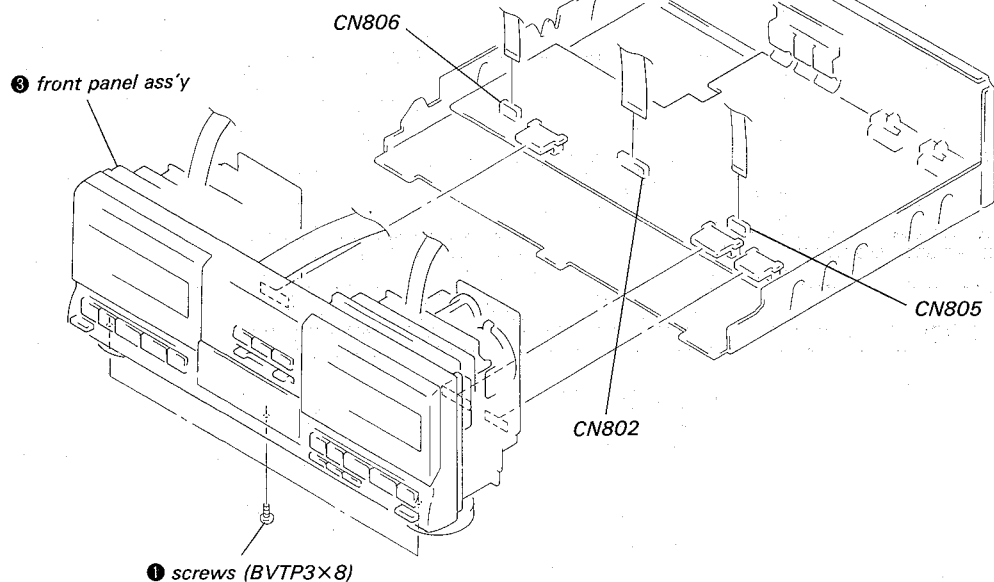
NOTE: Follow the disassembly procedure in the numerical order given.

CASE

Unscrew the four case attachment screws M3×8 and remove the case.

FRONT PANEL

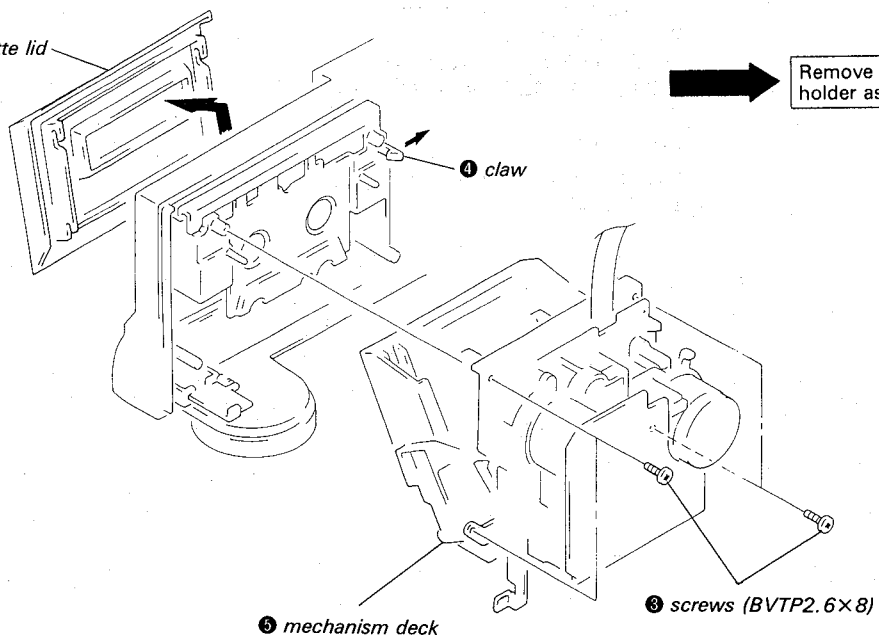
② Remove the connectors.



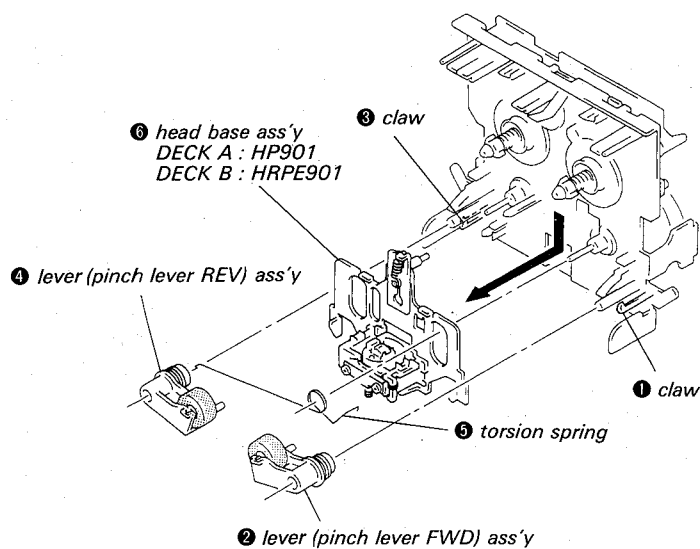
MECHANISM DECK

① Press the EJECT button.

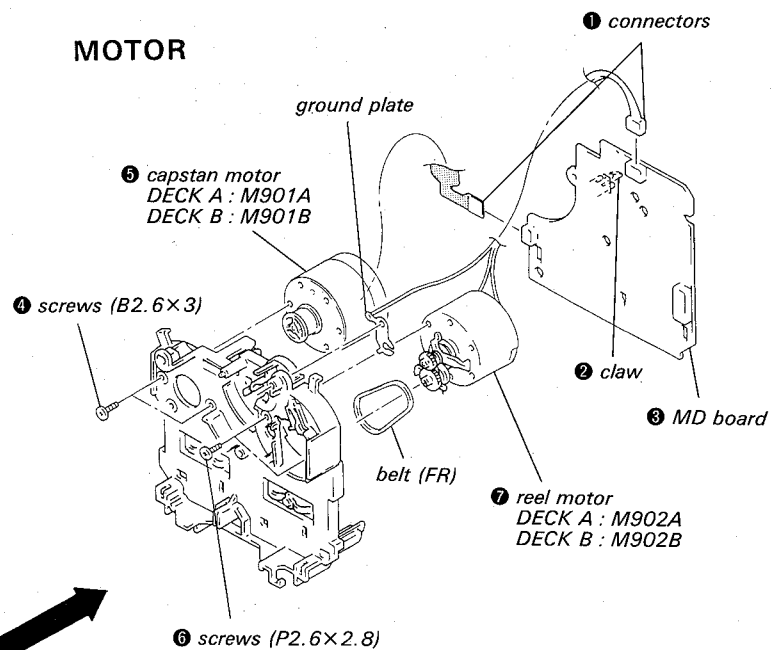
② cassette lid



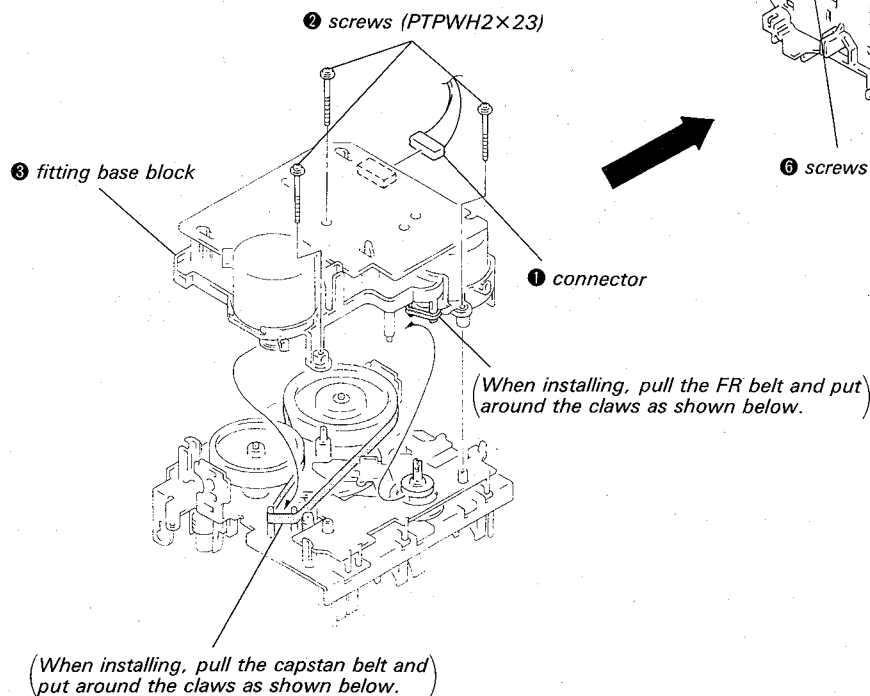
HEAD



MOTOR



FITTING BASE BLOCK



SECTION 3 MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcoholmoistened swab;

record/playback/erase head	
pinch roller	rubber belts
capstan	idler
2. Demagnetize the record/playback head with a head demagnetizer.
(Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed in the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	35 to 60g · cm (0.49 to 0.83 oz · inch)
FWD Back tension	CQ-102C	2 to 6g · cm (0.03 to 0.08 oz · inch)
REV	CQ-102RC	35 to 60g · cm (0.49 to 0.83 oz · inch)
REV Back tension	CQ-102RC	2 to 6g · cm (0.03 to 0.08 oz · inch)
FF, REW	CQ-201B	70 to 110g · cm (0.98 to 1.52 oz · inch)

SECTION 4 ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in the service manual. As a rule, adjustment about playback should be performed before adjustment about recording. The adjustments should be performed for both L-CH and R-CH.

● Test Mode

The Test mode is activated by shorting Test Point Service mode (IC801 64 pin changes over to "L") with the POWER switch in OFF position, then turning on the POWER switch.

In this mode, the following functions operate:

1. Source monitor

Line mute is cancelled during recording.

2. High speed playback

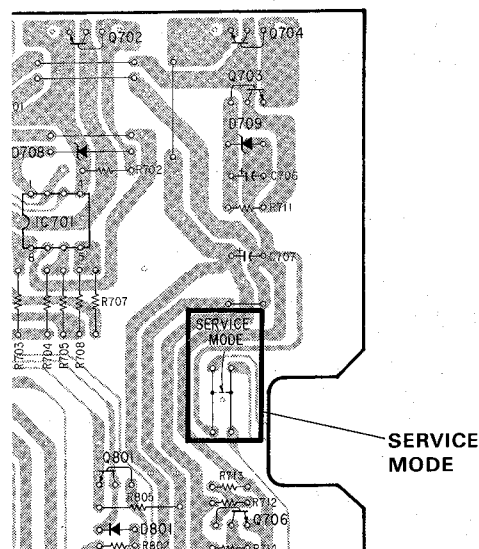
High speed playback is executed when the HIGH SPEED (DUBBING) button is pressed during playback. Normal speed playback is restored when the button is pressed again.

3. Record memory

The tape counter is reset to "0" at the record start point.

After adjustment, open the Service mode to cancel the Test mode.

[MAIN BOARD] (CONDUCTOR SIDE)



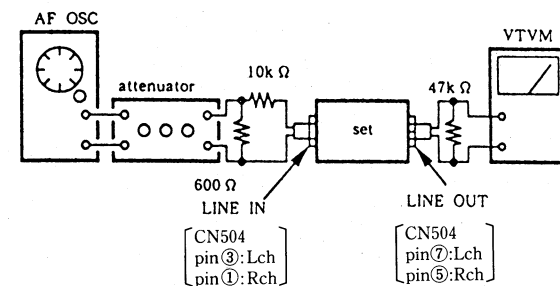
- Switches and controls should be set as follows unless otherwise specified.

NR switch : OFF
DIR MODE switch : →

Standard Record:

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Record Mode



Standard Input Level

input terminal	LINE IN
source impedance	10kΩ
input level	0.25V (-10dB)

Standard Output Level

output terminal	LINE OUT
load impedance	47kΩ
output level	0.44V (-5dB)

Test tape

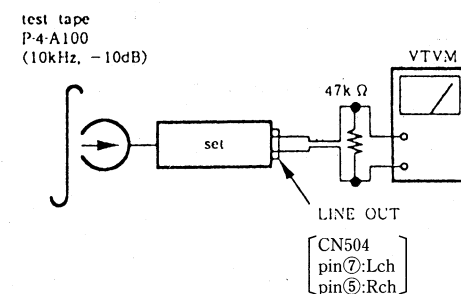
Type	Signal	Used for
P-4-A100	10kHz, -10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment

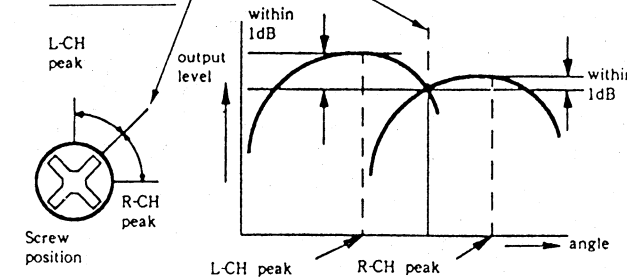
DECK A DECK B

Procedure :

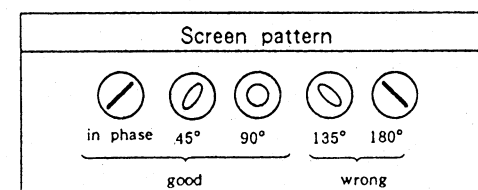
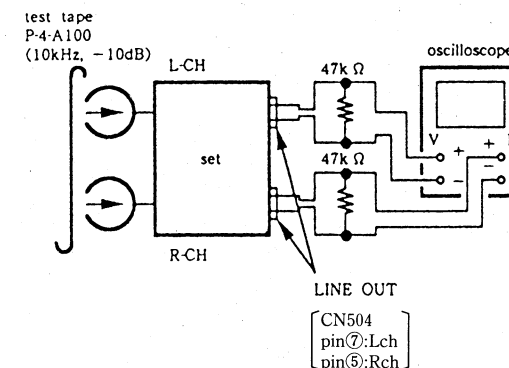
- Mode: FWD playback



- Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.

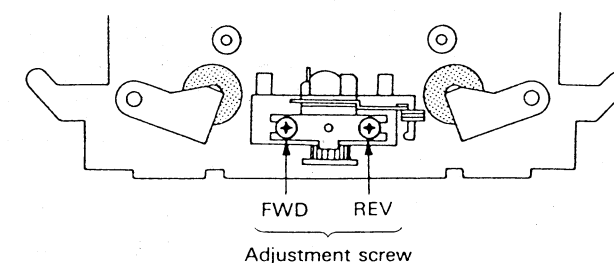


- Phase Check
Mode: playback



- Set in the REV mode and repeat the step 1-3.
- After the adjustment, lock the screws with locking compound.

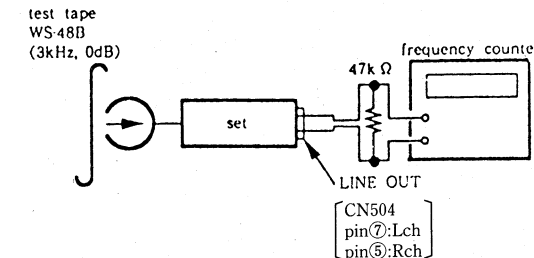
Adjustment Location : Record/playback head



Tape Speed Adjustment DECK A DECK B

Procedure :

Mode: playback



Perform high speed adjustment before normal speed adjustment.

(High speed adjustment)

- Continue pressing the SYNCHRO DUBBING HIGH SPEED switch.
- Check that frequency counter reading is within the standard value $6,000 \pm 60\text{Hz}$.
- If out of the standard, adjust each RV72 so that the frequency counter reading satisfies $6,000 \pm 60\text{Hz}$ on both A and B decks.
- Change over to Rev playback status, and repeat the above steps 1 to 3.

(Normal speed adjustment)

- Continue pressing the SYNCHRO DUBBING NORM SPEED switch.
- Check that the frequency counter reading is within the standard value $3,000 \pm 30\text{Hz}$.
- If out of the standard, adjust each RV71 so that the frequency counter reading satisfies $3,000 \pm 30\text{Hz}$ on both A and B decks.
- Change over to REV playback status, and repeat the above steps 1 to 3.

Frequency difference between the beginning and the end of the tape should be within 3%.

Frequency difference between deck A and deck B the beginning of the tape should be within 1.0%.

Adjustment Location :

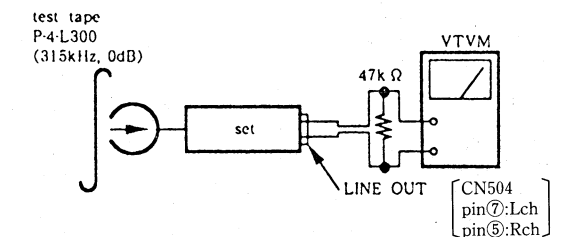
MD-A, MD-B board

Playback Level Adjustment

DECK A DECK B

Procedure :

Mode: playback



Adjust RV11 (L-CH), RV21 (R-CH) so that the reading on VTVM meets the adjustment limits below.

Adjustment Limits :

LINE OUT level: $-7.7 \pm 0.5\text{dB}$ (0.30-0.33V)

Level difference between channels: less than 0.5dB
Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location : MD-A, MD-B board

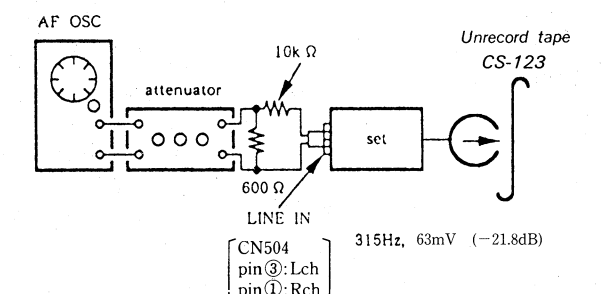
Record Bias Adjustment DECK B

Setting :

REC LEVEL control : Standard Record (See page 7).

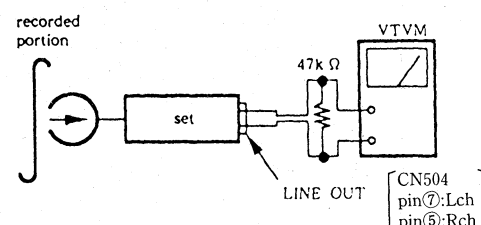
Procedure :

- Mode: record



SECTION 5 DIAGRAMS

2. Mode : playback



Playback the signal recorded in step 1.
Confirm that the 10kHz playback output is $0 \pm 0.5\text{dB}$ relative to the 315Hz output. If necessary, adjust RV12 (L-CH), RV22 (R-CH) and repeat the steps given above.

Adjustment Location : MD-B board

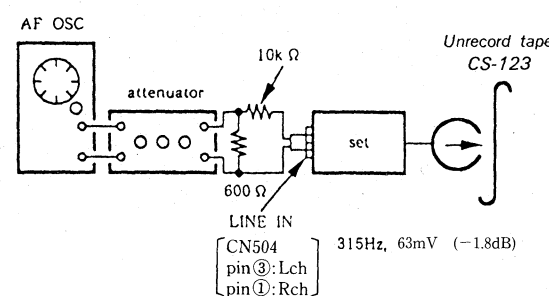
Record Level Adjustment **DECK B**

Setting :

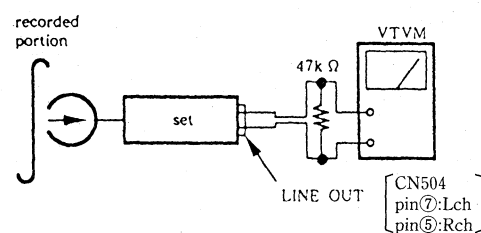
REC LEVEL control : Standard Record (See page 7).

Procedure :

1. Mode: record



2. Mode: playback



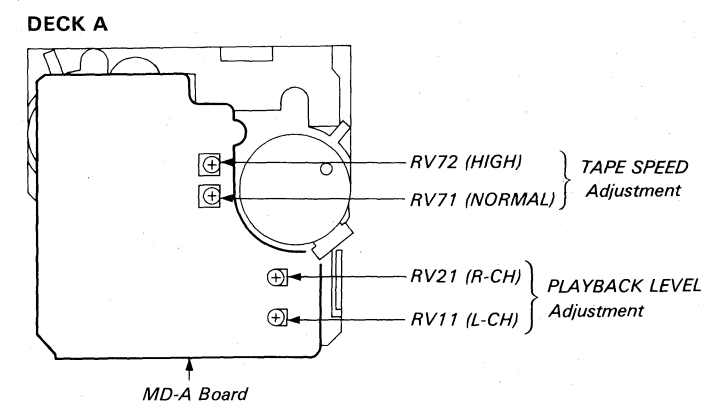
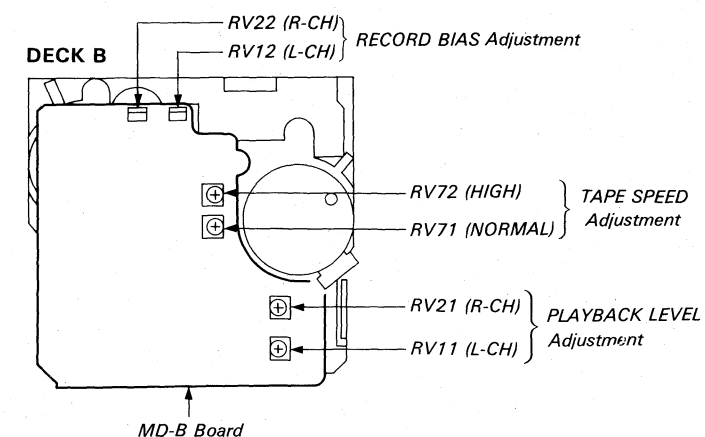
3. Playback the signal recorded in step 1.

Confirm that the signal level is within the adjustment limits below. If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat the step 1-2.

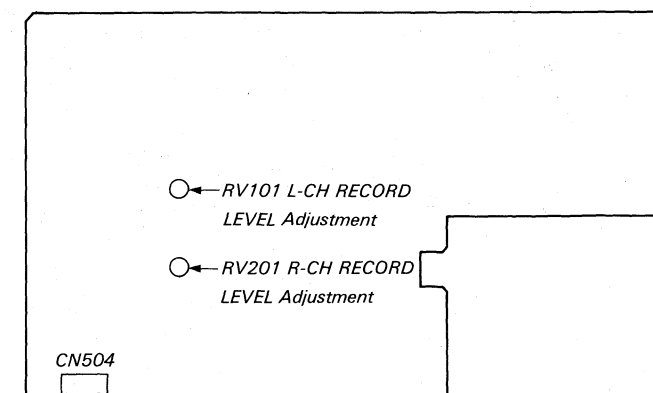
Adjustment Limits : $-3.8\text{dB} \pm 0.5\text{dB}$ (0.47 - 0.53V)

Adjustment Location : MAIN board (component side)

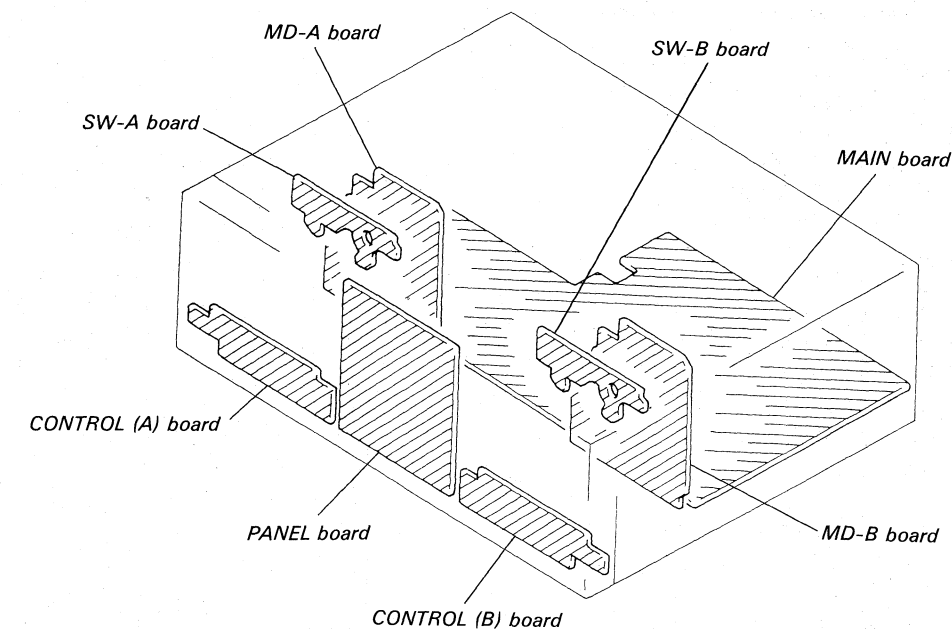
- Adjustment Parts Location Diagrams -



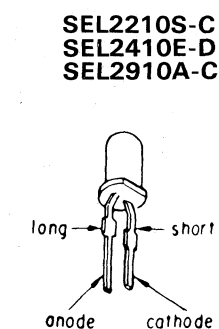
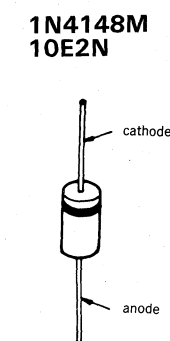
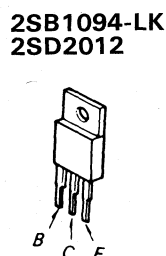
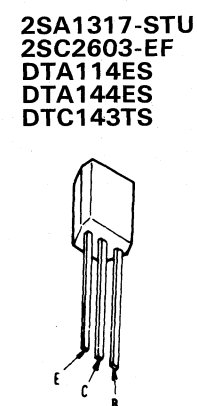
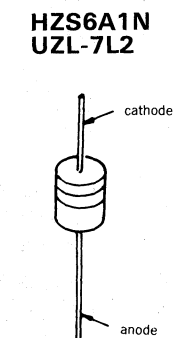
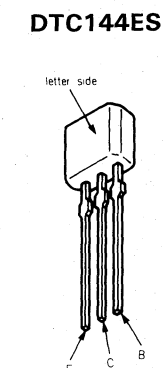
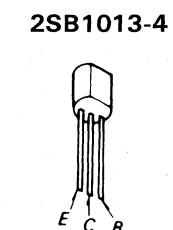
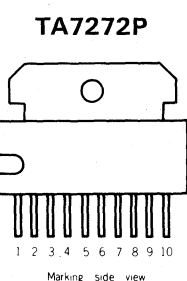
MAIN BOARD (COMPONENT SIDE)



5-1. CIRCUIT BOARDS LOCATION



5-2. SEMICONDUCTOR LEAD LAYOUTS



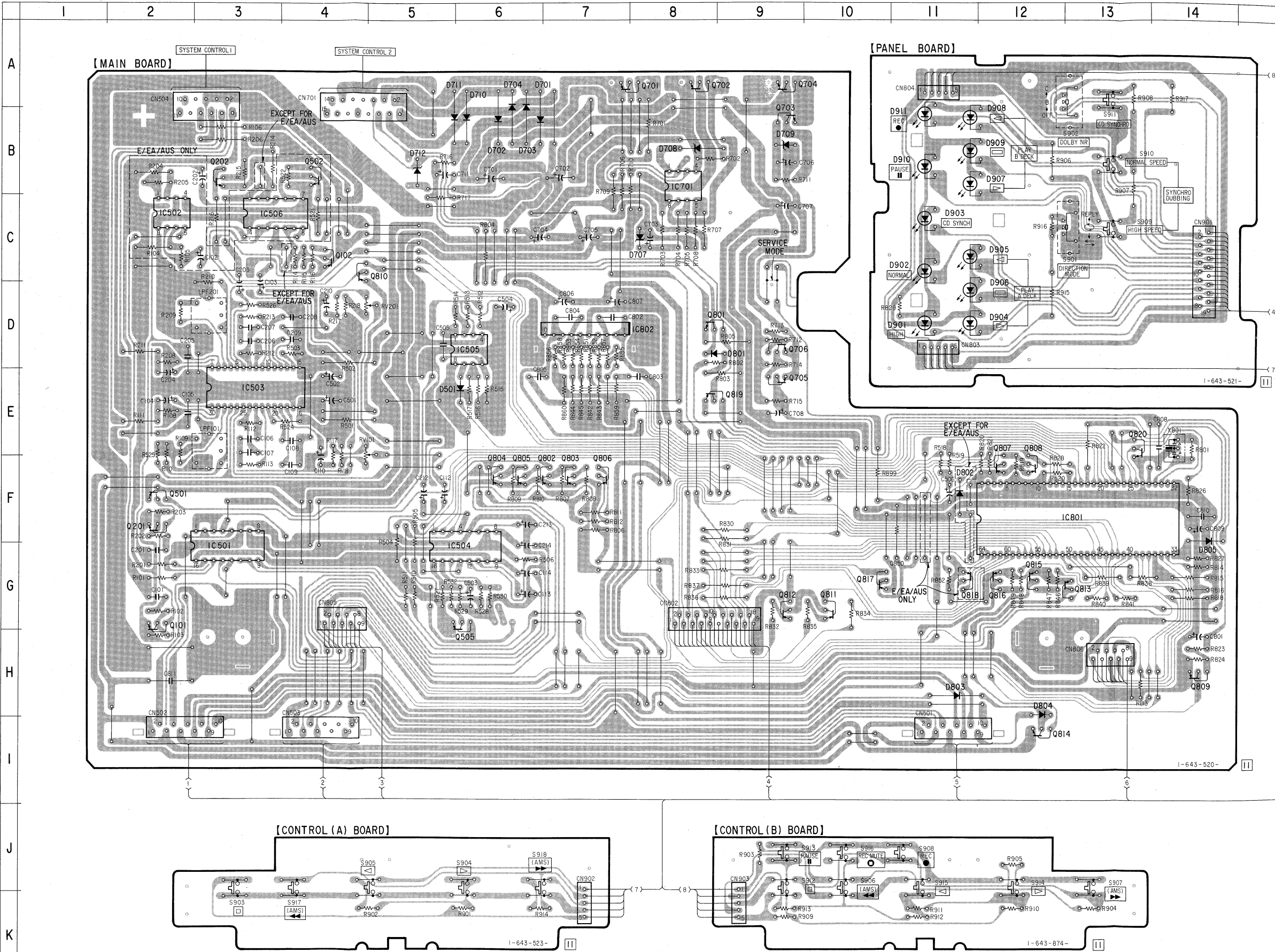
5-3. PRINTED WIRING BOARDS

● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D31	H-24	Q51	G-25
D501	E-6	Q52	G-25
D701	B-6	Q53	G-25
D702	B-6	Q71(MD-A)	H-20
D703	B-6	Q71(MD-B)	H-28
D704	B-6	Q101	G-2
D707	C-8	Q102	C-4
D708	B-8	Q201	F-2
D709	B-9	Q202	B-3
D710	B-6	Q501	F-2
D711	B-5	Q502	B-4
D712	B-5	Q505	G-6
D801	D-9	Q701	A-8
D802	F-11	Q702	A-8
D803	H-11	Q703	B-9
D804	H-12	Q704	A-9
D805	F-14	Q705	E-9
D901	D-11	Q706	D-9
D902	C-11	Q801	D-9
D903	C-11	Q802	F-7
D904	D-11	Q803	F-7
D905	C-11	Q804	F-6
D906	D-11	Q805	F-6
D907	B-11	Q806	F-7
D908	B-11	Q807	F-12
D909	B-11	Q808	F-12
D910	B-11	Q809	H-14
D911	B-11	Q810	C-4
		Q811	G-10
IC31(MD-A)	H-19	Q812	G-9
IC31(MD-B)	H-26	Q813	G-13
IC81(SW-A)	B-20	Q814	I-12
IC81(SW-B)	B-27	Q815	G-12
IC501	G-3	Q816	G-12
IC502	C-2	Q817	G-10
IC503	E-3	Q818	G-11
IC504	G-6	Q819	E-9
IC505	D-6	Q820	E-13
IC506	C-3		
IC701	B-8		
IC801	F-13		
IC802	D-6		







Note:
● ○ : parts extracted from the component side.

EA: Saudi Arabia
AUS: Australian

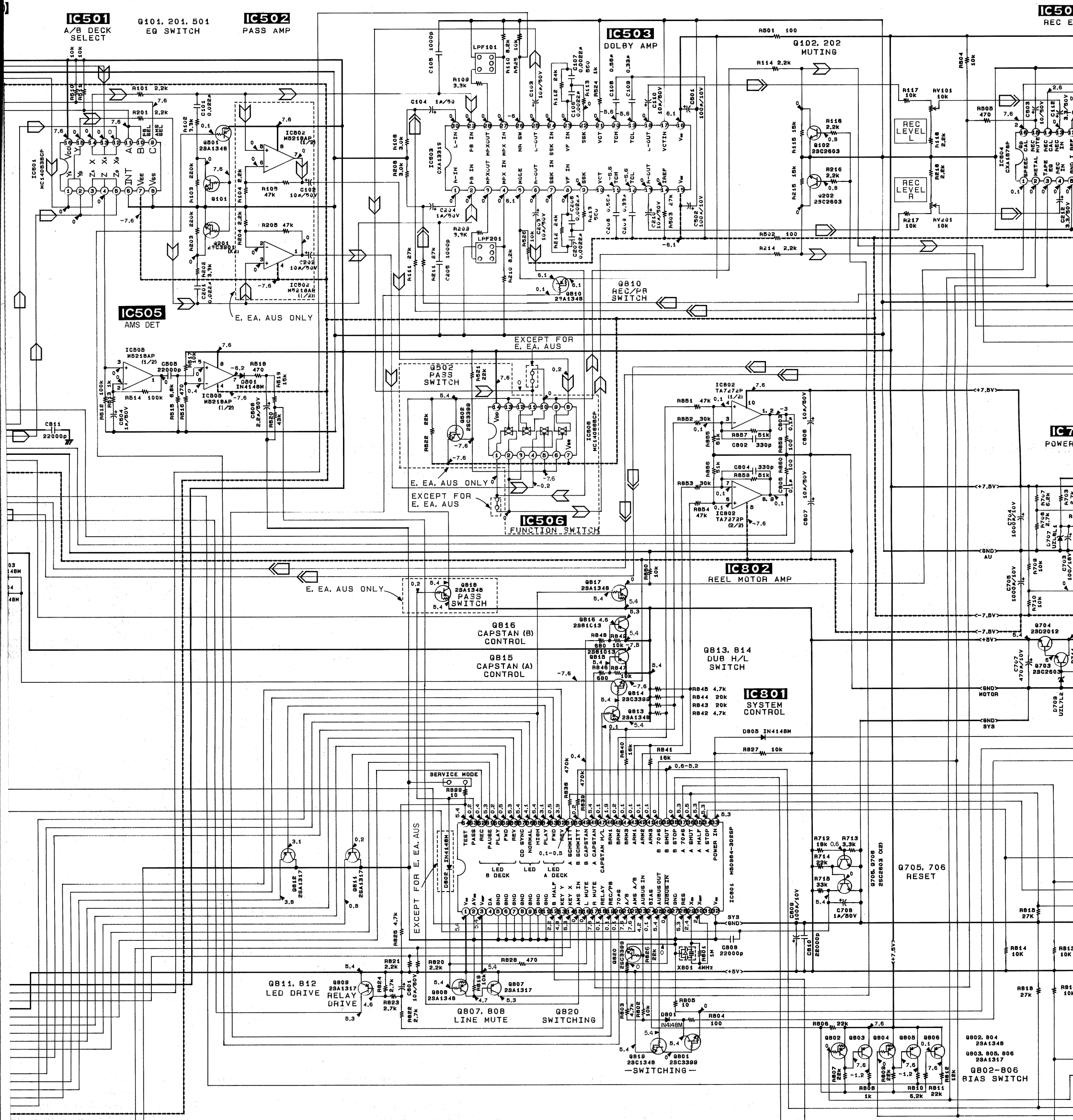


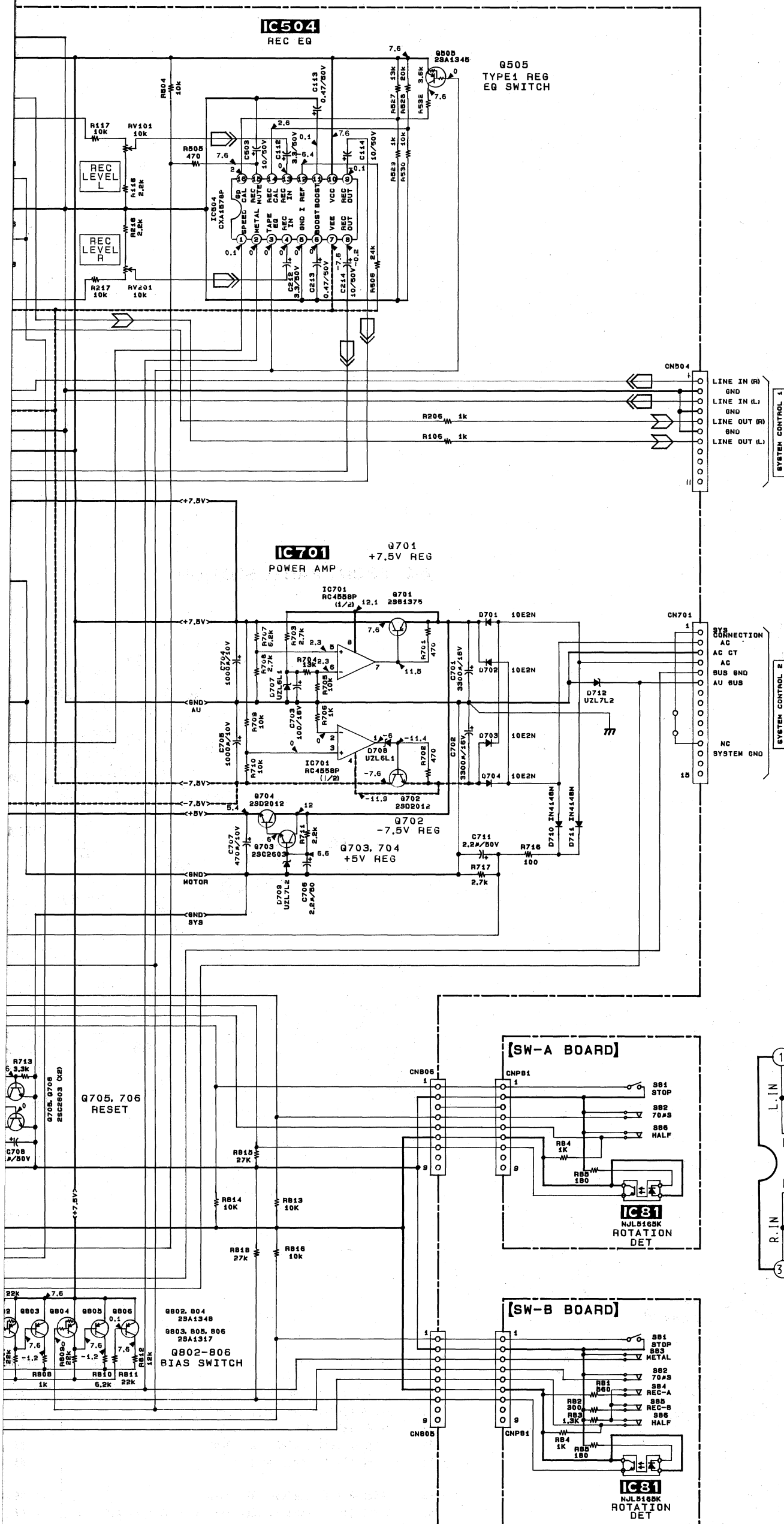
1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---



- All capacitors are in μF unless otherwise noted. pF : μF 50VW or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- \triangle : internal component.
-  : B+ Line
-  : B- Line
-  : adjustment for repair.
- Voltage is dc with respect to ground under no-signal (detuned) conditions.
no mark : REC
- Voltages are taken with a VOM (Input Impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
- Signal path.
 -  : PB (DECK A)
 -  : PB (DECK B)
 -  : REC (DECK B)

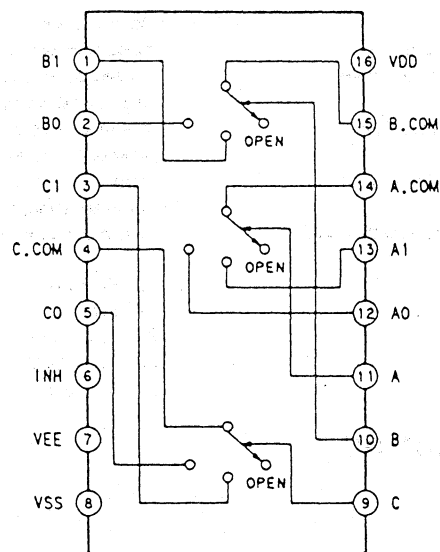
— 15 —



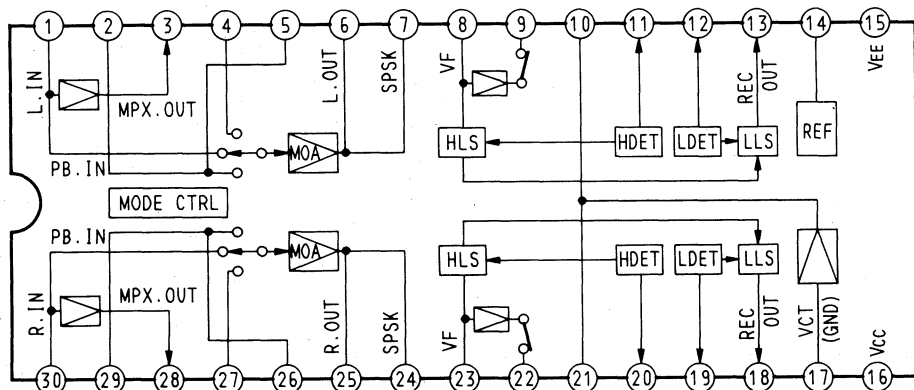


● IC Block Diagrams

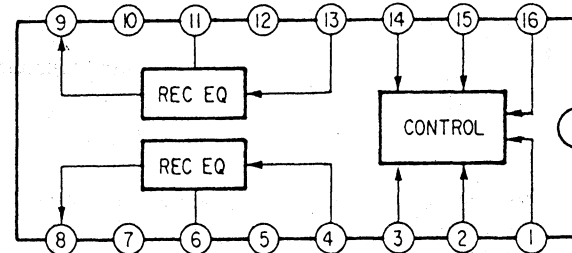
IC501 μ PD4053BC



IC503 CXA1331S



IC504 CXA1578P



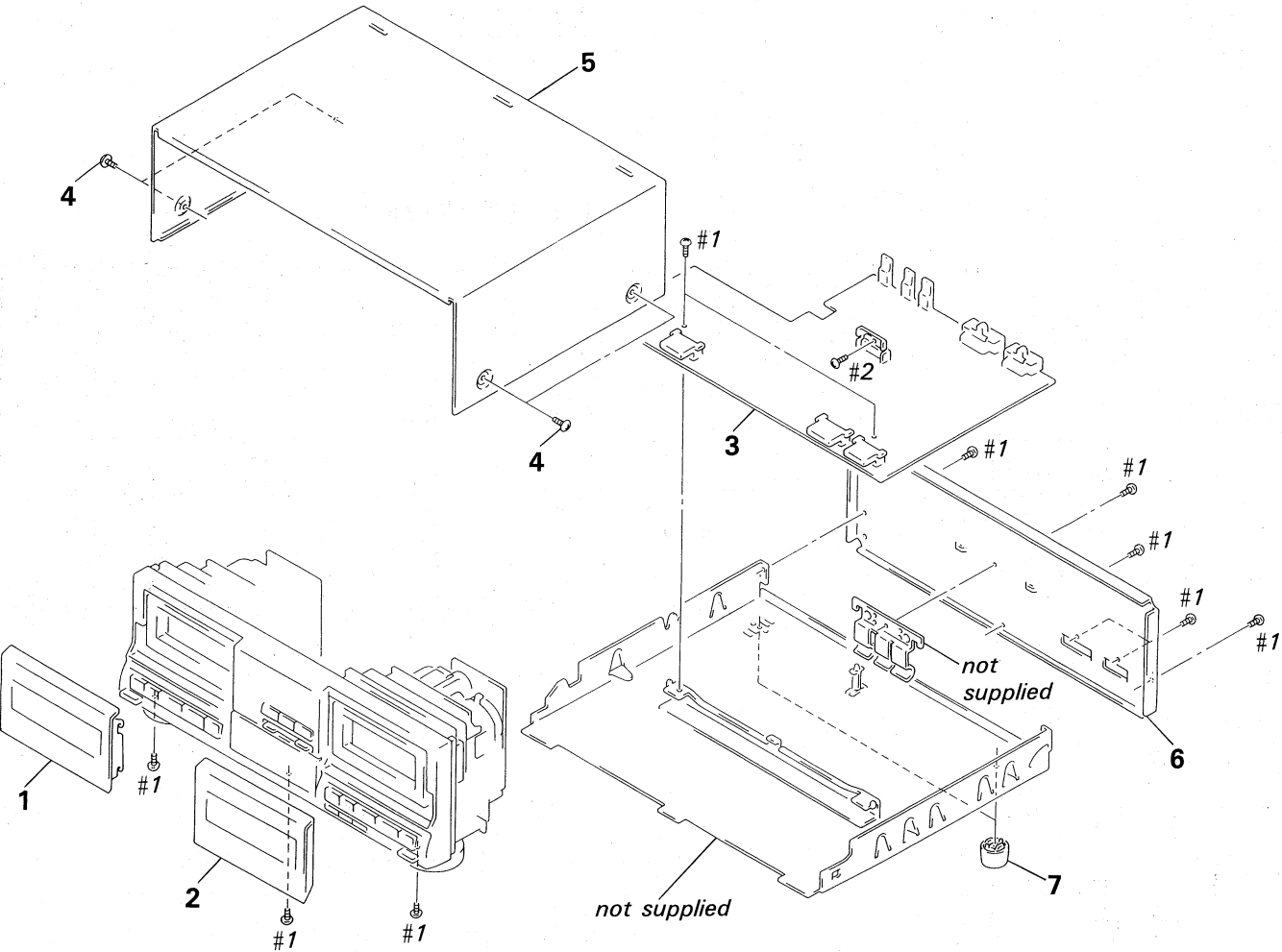
SECTION 6
EXPLODED VIEWS

NOTE:
• -XX, -X mean standardized parts, so they may have some differences from the original one.
• Color Indication of Appearance Parts
Example:
KNOB, BALANCE(WHITE)...(RED)
↑ ↑
Parts color Cabinet's color

• Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
• The mechanical parts with no reference number in the exploded views are not supplied.
• hardware (#mark) list is given in the last of this parts list.

G : Germany
IT : Italian
EE : East European
EA : Saudi Arabia
AUS : Australian

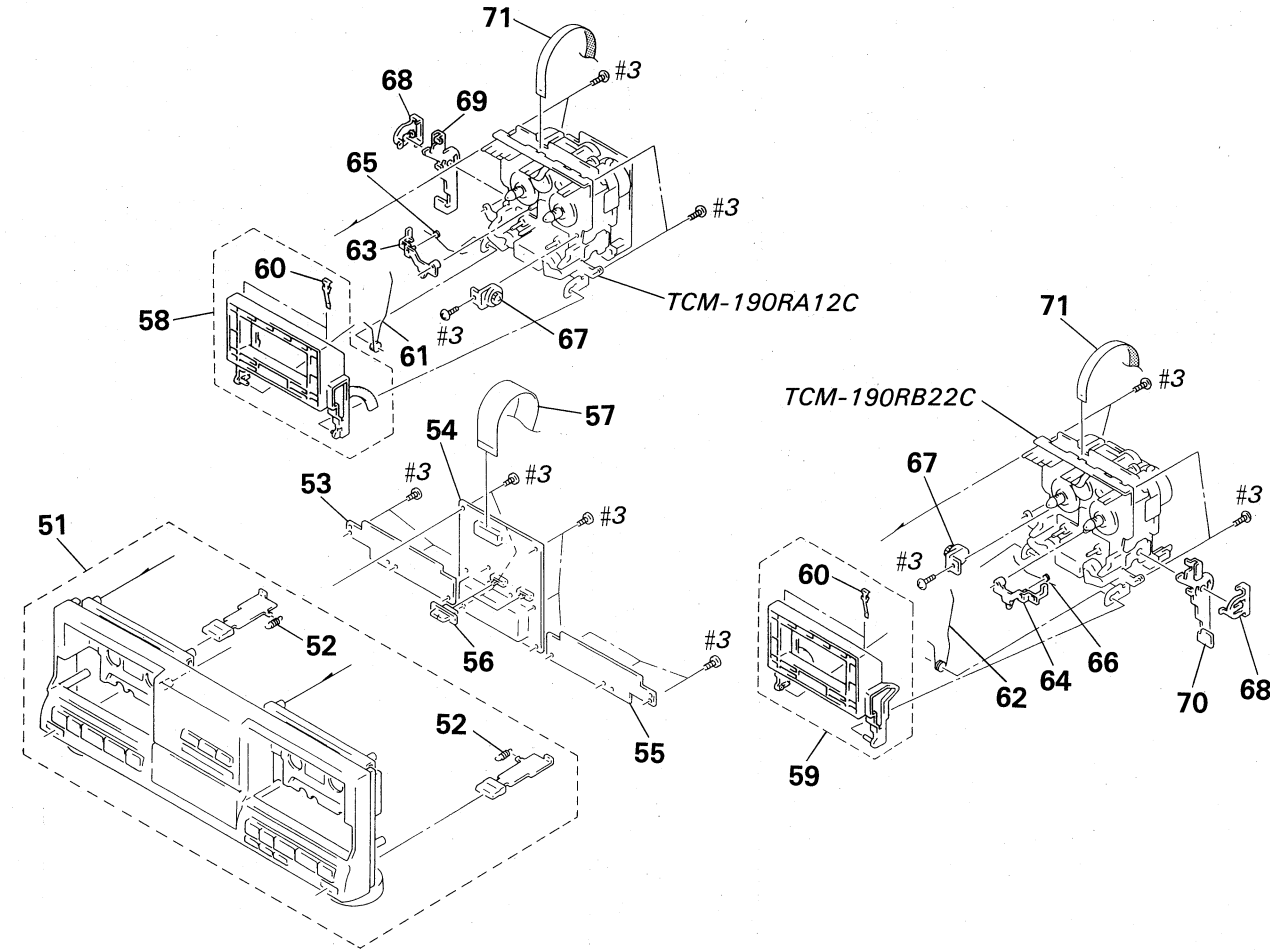
6-1. OVERALL SECTION



Ref. No.	Part No.	Description	Remark
1	X-3364-710-1	LID (A) ASSY, CASSETTE (AEP, G, EE, UK, E, EA, AUS)	
1	X-3364-711-1	LID (A) ASSY, CASSETTE (IT)	
2	X-3364-712-1	LID (B) ASSY, CASSETTE (AEP, G, EE, UK, E, EA, AUS)	
2	X-3364-713-1	LID (B) ASSY, CASSETTE (IT)	
* 3	A-2006-741-A	MAIN BOARD, COMPLETE (AEP, G, IT, EE, UK)	

Ref. No.	Part No.	Description	Remark
* 3	A-2006-742-A	MAIN BOARD, COMPLETE (E, EA, AUS)	
4	3-363-099-01	SCREW (CASE +3X8 TP2)	
* 5	4-939-803-31	CASE (AEP, G, EE, UK, E, EA, AUS)	
* 5	4-939-803-71	CASE (IT)	
* 6	3-377-136-11	PANEL, BACK (AEP, IT, EE, UK, E, EA, AUS)	
* 6	3-377-136-21	PANEL, BACK (G)	
7	4-931-169-01	FOOT	

6-2. FRONT PANEL SECTION

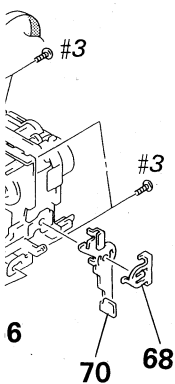


Ref. No.	Part No.	Description	Remark
51	X-3364-706-1	PANEL ASSY, FRONT (AEP, G, EE, UK, E, EA, AUS)	
51	X-3364-707-1	PANEL ASSY, FRONT (IT)	
52	3-662-752-21	SPRING, TENSION	
* 53	1-643-523-11	CONTROL (A) BOARD	
* 54	1-643-521-11	PANEL BOARD	
* 55	1-643-874-11	CONTROL (B) BOARD	
56	3-377-110-01	KNOB (SLIDE) (AEP, G, EE, UK, E, EA, AUS)	
56	3-377-110-11	KNOB (SLIDE) (IT)	
57	1-590-237-11	WIRE, FLAT TYPE (19 CORE)	
58	X-3340-194-1	HOLDER (L) ASSY, CASSETTE	
59	X-3340-195-1	HOLDER (R) ASSY, CASSETTE	
60	3-308-823-11	SPRING	

Ref. No.	Part No.	Description	Remark
61	3-354-959-01	SPRING (LOADING L), TORSION	
62	3-354-960-01	SPRING (LOADING R), TORSION	
63	3-354-955-01	LEVER (EJ SAFTY LEVER L)	
64	3-354-956-01	LEVER (EJ SAFTY LEVER R)	
65	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
66	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
67	3-354-963-01	DAMPER	
68	3-354-957-01	JOINT (LOCK LEVER)	
* 69	3-363-638-01	LEVER (LOCK LEVER L)	
* 70	3-363-639-01	LEVER (LOCK LEVER R)	
71	1-690-906-11	WIRE (FLAT TYPE) (9 CORE)	

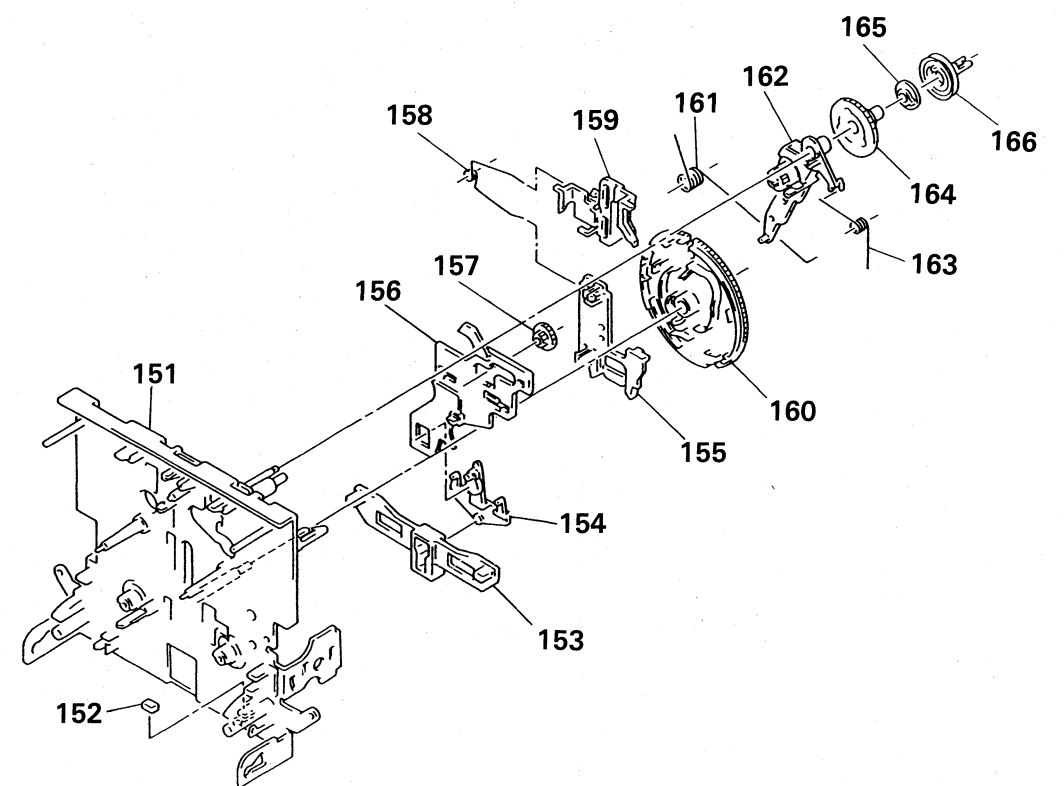
6-3. MECHANISM
(TCM-190RA1
TCM-190RB2)

Ref. No.	Part No.	Description	Remark
101	3-359-455-01	SPRING (LOADING L), TORSION	
102	3-356-714-01	SPRING (LOADING R), TORSION	
103	X-3359-408-1	LEVER (EJ SAFTY LEVER L)	
104	3-356-713-01	LEVER (EJ SAFTY LEVER R)	
105	X-3359-409-1	SPRING (EJ SAFTY SPRING L)	
106	X-3359-404-1	SPRING (EJ SAFTY SPRING R)	
107	3-359-424-01	DAMPER	
108	X-3359-406-1	JOINT (LOCK LEVER)	
108	X-3364-554-1	LEVER (LOCK LEVER L)	
109	X-3359-410-1	LEVER (LOCK LEVER R)	
110	3-359-417-01	WIRE (FLAT TYPE) (9 CORE)	
111	3-359-450-01	PLATE	
* 112	3-359-436-01	BA	
113	3-359-466-01	BE	
114	3-575-321-00	RE	
115	3-359-430-01	SP	

$$\begin{pmatrix} \text{TCM-190RA12C} \\ \text{TCM-190RB22C} \end{pmatrix}$$


RSIO
RSIO
L)
R)
G L)
G R)
RE)

(TCM-190RA12C)
(TCM-190RB22C)



* 155	3-359-427-01	SLIDER (LEVERSE SLIDER)
* 156	3-359-415-01	SLIDER (TRIGGER SLIDER)
157	3-359-448-01	GEAR (TRIGGER)
158	3-359-454-01	SPRING, TORSION

SECTION 7 ELECTRICAL PARTS LIST

MAIN

PANEL

CONTROL (A)

CONTROL (B)

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA...: μ PA...,
uPB...: μ PB..., uPC...: μ PC...,
uPD...: μ PD...
- CAPACITORS
uF: μ F
- COILS
uH: μ H

G : Germany
IT : Italian
EE : East European

EA : Saudi Arabia
AUS : Australian

When indication parts by reference number, please include the board name.

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
*	A-2006-741-A	MAIN BOARD, COMPLETE (AEP, G, IT, EE, UK) *****	
*	A-2006-742-A	MAIN BOARD, COMPLETE (E, EA, AUS) *****	
*	1-643-521-11	PANEL BOARD *****	
*	1-643-523-11	CONTROL (A) BOARD *****	
*	1-643-874-11	CONTROL (B) BOARD *****	
*	3-377-119-01	HOLDER, LED	
*	4-942-204-01	PLATE, GROUND	
	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S	
< CAPACITOR >			
C101	1-136-157-00	FILM 0.022uF 5% 50V	
C102	1-126-059-11	ELECT 10uF 20% 50V (E, EA, AUS)	
C103	1-126-059-11	ELECT 10uF 20% 50V	
C104	1-126-301-11	ELECT 1uF 20% 50V	
C105	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C106	1-130-475-00	MYLAR 0.0022uF 5% 50V	
C107	1-130-475-00	MYLAR 0.0022uF 5% 50V	
C108	1-136-174-00	FILM 0.56uF 5% 50V	
C109	1-136-171-00	FILM 0.33uF 5% 50V	
C110	1-126-059-11	ELECT 10uF 20% 50V	
C112	1-126-162-11	ELECT 3.3uF 20% 50V	
C113	1-126-300-11	ELECT 0.47uF 20% 50V	
C114	1-126-059-11	ELECT 10uF 20% 50V	
C201	1-136-157-00	FILM 0.022uF 5% 50V	
C202	1-126-059-11	ELECT 10uF 20% 50V (E, EA, AUS)	
C203	1-126-059-11	ELECT 10uF 20% 50V	
C204	1-126-301-11	ELECT 1uF 20% 50V	
C205	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C206	1-130-475-00	MYLAR 0.0022uF 5% 50V	
C207	1-130-475-00	MYLAR 0.0022uF 5% 50V	

Ref. No.	Part No.	Description	Remark
C208	1-136-174-00	FILM 0.56uF 5% 50V	
C209	1-136-171-00	FILM 0.33uF 5% 50V	
C210	1-126-059-11	ELECT 10uF 20% 50V	
C212	1-126-162-11	ELECT 3.3uF 20% 50V	
C213	1-126-300-11	ELECT 0.47uF 20% 50V	
C214	1-126-059-11	ELECT 10uF 20% 50V	
C501	1-124-994-11	ELECT 100uF 20% 10V	
C502	1-124-994-11	ELECT 100uF 20% 10V	
C503	1-126-059-11	ELECT 10uF 20% 50V	
C504	1-126-301-11	ELECT 1uF 20% 50V	
C505	1-161-494-00	CERAMIC 0.022uF 25V	
C506	1-126-161-11	ELECT 2.2uF 20% 50V	
C701	1-124-887-00	ELECT 3300uF 20% 16V	
C702	1-124-887-00	ELECT 3300uF 20% 16V	
C703	1-126-101-11	ELECT 100uF 20% 16V	
C704	1-124-473-11	ELECT 1000uF 20% 10V	
C705	1-124-473-11	ELECT 1000uF 20% 10V	
C706	1-126-161-11	ELECT 2.2uF 20% 50V	
C707	1-124-472-11	ELECT 470uF 20% 10V	
C708	1-126-301-11	ELECT 1uF 20% 50V	
C711	1-126-161-11	ELECT 2.2uF 20% 50V	
C801	1-126-059-11	ELECT 10uF 20% 50V	
C802	1-162-288-31	CERAMIC 330PF 10% 50V	
C803	1-136-165-00	FILM 0.1uF 5% 50V	
C804	1-162-288-31	CERAMIC 330PF 10% 50V	
C805	1-136-165-00	FILM 0.1uF 5% 50V	
C806	1-126-059-11	ELECT 10uF 20% 50V	
C807	1-126-059-11	ELECT 10uF 20% 50V	
C808	1-161-494-00	CERAMIC 0.022uF 25V	
C809	1-124-994-11	ELECT 100uF 20% 10V	
C810	1-161-494-00	CERAMIC 0.022uF 25V	
C811	1-161-494-00	CERAMIC 0.022uF 25V	

MAIN

PANEL

CONTROL (A)

CONTROL (B)

Ref. No.	Part No.	Description	Remark
< CONNECTOR >			
* CN501	1-580-784-11	CONNECTOR, BOARD TO BOARD	
* CN502	1-580-784-11	CONNECTOR, BOARD TO BOARD	
* CN503	1-580-784-11	CONNECTOR, BOARD TO BOARD	
* CN504	1-566-858-41	SOCKET, CONNECTOR 11P (SYSTEM CONTROL 1)	
* CN701	1-566-859-11	SOCKET, CONNECTOR 15P (SYSTEM CONTROL 2)	
CN802	1-568-802-11	SOCKET, CONNECTOR 19P	
* CN803	1-691-670-11	CONNECTOR, BOARD TO BOARD 5P	
* CN804	1-691-670-11	CONNECTOR, BOARD TO BOARD 5P	
* CN805	1-568-828-11	SOCKET, CONNECTOR 9P	
* CN806	1-568-828-11	SOCKET, CONNECTOR 9P	
* CN901	1-568-862-11	SOCKET, CONNECTOR 19P	
* CN902	1-691-746-11	CONNECTOR, BOARD TO BOARD 5P	
* CN903	1-691-746-11	CONNECTOR, BOARD TO BOARD 5P	
< DIODE >			
D501	8-719-987-63	DIODE 1N4148M	
D701	8-719-200-77	DIODE 10E2N	
D702	8-719-200-77	DIODE 10E2N	
D703	8-719-200-77	DIODE 10E2N	
D704	8-719-200-77	DIODE 10E2N	
D707	8-719-933-33	DIODE HZS6A1L	
D708	8-719-933-33	DIODE HZS6A1L	
D709	8-719-000-78	DIODE UZL-7L2	
D710	8-719-987-63	DIODE 1N4148M	
D711	8-719-987-63	DIODE 1N4148M	
D712	8-719-000-78	DIODE UZL-7L2	
D801	8-719-987-63	DIODE 1N4148M	
D802	8-719-987-63	DIODE 1N4148M (AEP, G, IT, EE, UK)	
D803	8-719-987-63	DIODE 1N4148M	
D804	8-719-987-63	DIODE 1N4148M	
D805	8-719-987-63	DIODE 1N4148M	
D901	8-719-301-38	LED SEL2210S-C (HIGH)	
D902	8-719-301-38	LED SEL2210S-C (NORMAL)	
D903	8-719-301-38	LED SEL2210S-C (CD SYNCH)	
D904	8-719-302-41	LED SEL2910A-C (A FWD)	
D905	8-719-302-41	LED SEL2910A-C (A REV)	
D906	8-719-301-44	LED SEL2410E-D (A STOP)	
D907	8-719-302-41	LED SEL2910A-C (B FWD)	
D908	8-719-302-41	LED SEL2910A-C (B REV)	
D909	8-719-301-44	LED SEL2410E-D (B STOP)	
D910	8-719-302-41	LED SEL2910A-C (PAUSE)	
D911	8-719-301-38	LED SEL2210S-C (REC)	
< IC >			
IC501	8-759-140-53	IC uPD4053BC	
IC502	8-759-634-51	IC M5218AP (E, EA, AUS)	
IC503	8-752-059-55	IC CXA1331S	

Ref. No.	Part No.	Description	Remark
IC504	8-752-055-61	IC CXA1578P	
IC505	8-759-634-51	IC M5218AP	
IC506	8-759-000-49	IC MC14066BCP (E, EA, AUS)	
IC701	8-759-945-58	IC RC4558P	
IC801	8-759-061-69	IC M50964-302SP	
IC802	8-759-207-05	IC TA7272P	
< FILTER >			
LPF101	1-236-087-11	FILTER, LOW PASS	
LPF201	1-236-087-11	FILTER, LOW PASS	
< TRANSISTOR >			
Q101	8-729-900-74	TRANSISTOR DTC143TS	
Q102	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q201	8-729-900-74	TRANSISTOR DTC143TS	
Q202	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q501	8-729-900-61	TRANSISTOR DTA114ES	
Q502	8-729-900-89	TRANSISTOR DTC144ES (E, EA, AUS)	
Q505	8-729-900-65	TRANSISTOR DTA144ES	
Q701	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q702	8-729-209-15	TRANSISTOR 2SD2012	
Q703	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q704	8-729-209-15	TRANSISTOR 2SD2012	
Q705	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q706	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q801	8-729-900-89	TRANSISTOR DTC144ES	
Q802	8-729-900-61	TRANSISTOR DTA114ES	
Q803	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q804	8-729-900-61	TRANSISTOR DTA114ES	
Q805	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q806	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q807	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q808	8-729-900-61	TRANSISTOR DTA114ES	
Q809	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q810	8-729-900-61	TRANSISTOR DTA114ES	
Q811	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q812	8-729-821-04	TRANSISTOR 2SA1317-STU	
Q813	8-729-900-61	TRANSISTOR DTA114ES	
Q814	8-729-900-89	TRANSISTOR DTC144ES	
Q815	8-729-801-84	TRANSISTOR 2SB1013-4	
Q816	8-729-801-84	TRANSISTOR 2SB1013-4	
Q817	8-729-900-61	TRANSISTOR DTA114ES	
Q818	8-729-900-65	TRANSISTOR DTA144ES (E, EA, AUS)	
Q819	8-729-900-61	TRANSISTOR DTA114ES	
Q820	8-729-900-89	TRANSISTOR DTC144ES	
< RESISTOR >			
R101	1-249-421-11	CARBON 2.2K 5% 1/4W	

MAIN

PANEL

CONTROL (A)

CONTROL (B)

Ref. No.	Part No.	Description	Remark		
R102	1-249-423-11	CARBON	3. 3K	5%	1/4W
R103	1-247-887-00	CARBON	220K	5%	1/4W
R104	1-249-421-11	CARBON	2. 2K	5%	1/4W (E, EA, AUS)
R105	1-249-437-11	CARBON	47K	5%	1/4W (E, EA, AUS)
R106	1-249-417-11	CARBON	1K	5%	1/4W
R108	1-247-842-11	CARBON	3K	5%	1/4W
R109	1-249-423-11	CARBON	3. 3K	5%	1/4W
R110	1-249-428-11	CARBON	8. 2K	5%	1/4W
R111	1-249-434-11	CARBON	27K	5%	1/4W
R112	1-247-864-11	CARBON	24K	5%	1/4W
R113	1-249-414-11	CARBON	560	5%	1/4W
R114	1-249-421-11	CARBON	2. 2K	5%	1/4W
R115	1-249-431-11	CARBON	15K	5%	1/4W
R116	1-249-421-11	CARBON	2. 2K	5%	1/4W
R117	1-249-429-11	CARBON	10K	5%	1/4W
R118	1-249-421-11	CARBON	2. 2K	5%	1/4W
R201	1-249-421-11	CARBON	2. 2K	5%	1/4W
R202	1-249-423-11	CARBON	3. 3K	5%	1/4W
R203	1-247-887-00	CARBON	220K	5%	1/4W
R204	1-249-421-11	CARBON	2. 2K	5%	1/4W (E, EA, AUS)
R205	1-249-437-11	CARBON	47K	5%	1/4W (E, EA, AUS)
R206	1-249-417-11	CARBON	1K	5%	1/4W
R208	1-247-842-11	CARBON	3K	5%	1/4W
R209	1-249-423-11	CARBON	3. 3K	5%	1/4W
R210	1-249-428-11	CARBON	8. 2K	5%	1/4W
R211	1-249-434-11	CARBON	27K	5%	1/4W
R212	1-247-864-11	CARBON	24K	5%	1/4W
R213	1-249-414-11	CARBON	560	5%	1/4W
R214	1-249-421-11	CARBON	2. 2K	5%	1/4W
R215	1-249-431-11	CARBON	15K	5%	1/4W
R216	1-249-421-11	CARBON	2. 2K	5%	1/4W
R217	1-249-429-11	CARBON	10K	5%	1/4W
R218	1-249-421-11	CARBON	2. 2K	5%	1/4W
R501	1-249-405-11	CARBON	100	5%	1/4W
R502	1-249-405-11	CARBON	100	5%	1/4W
R503	1-249-434-11	CARBON	27K	5%	1/4W
R504	1-249-429-11	CARBON	10K	5%	1/4W
R505	1-249-413-11	CARBON	470	5%	1/4W
R506	1-247-864-11	CARBON	24K	5%	1/4W
R510	1-249-429-11	CARBON	10K	5%	1/4W
R511	1-249-429-11	CARBON	10K	5%	1/4W
R512	1-249-441-11	CARBON	100K	5%	1/4W
R513	1-249-417-11	CARBON	1K	5%	1/4W
R514	1-249-441-11	CARBON	100K	5%	1/4W
R515	1-249-427-11	CARBON	6. 8K	5%	1/4W
R516	1-249-413-11	CARBON	470	5%	1/4W
R517	1-249-429-11	CARBON	10K	5%	1/4W
R518	1-249-413-11	CARBON	470	5%	1/4W
R519	1-249-431-11	CARBON	15K	5%	1/4W

Ref. No.	Part No.	Description	Remark		
R520	1-247-870-11	CARBON	43K	5%	1/4W
R521	1-249-433-11	CARBON	22K	5%	1/4W (E, EA, AUS)
R522	1-249-433-11	CARBON	22K	5%	1/4W (E, EA, AUS)
R524	1-249-417-11	CARBON	1K	5%	1/4W
R525	1-249-429-11	CARBON	10K	5%	1/4W
R526	1-249-429-11	CARBON	10K	5%	1/4W
R527	1-247-858-11	CARBON	13K	5%	1/4W
R528	1-247-862-11	CARBON	20K	5%	1/4W
R529	1-249-417-11	CARBON	1K	5%	1/4W
R530	1-249-429-11	CARBON	10K	5%	1/4W
R532	1-247-844-11	CARBON	3. 6K	5%	1/4W
R701	1-249-413-11	CARBON	470	5%	1/4W
R702	1-249-413-11	CARBON	470	5%	1/4W
R703	1-249-422-11	CARBON	2. 7K	5%	1/4W
R704	1-247-858-11	CARBON	13K	5%	1/4W
R705	1-249-429-11	CARBON	10K	5%	1/4W
R706	1-249-417-11	CARBON	1K	5%	1/4W
R707	1-247-850-11	CARBON	6. 2K	5%	1/4W
R708	1-249-422-11	CARBON	2. 7K	5%	1/4W
R709	1-249-429-11	CARBON	10K	5%	1/4W
R710	1-249-429-11	CARBON	10K	5%	1/4W
R711	1-249-421-11	CARBON	2. 2K	5%	1/4W
R712	1-249-432-11	CARBON	18K	5%	1/4W
R713	1-249-423-11	CARBON	3. 3K	5%	1/4W
R714	1-249-433-11	CARBON	22K	5%	1/4W
R715	1-249-435-11	CARBON	33K	5%	1/4W
R716	1-249-405-11	CARBON	100	5%	1/4W
R717	1-249-422-11	CARBON	2. 7K	5%	1/4W
R801	1-247-903-00	CARBON	1M	5%	1/4W
R802	1-249-429-11	CARBON	10K	5%	1/4W
R803	1-249-425-11	CARBON	4. 7K	5%	1/4W
R804	1-249-405-11	CARBON	100	5%	1/4W
R805	1-249-393-11	CARBON	10	5%	1/4W
R806	1-249-433-11	CARBON	22K	5%	1/4W
R807	1-249-433-11	CARBON	22K	5%	1/4W
R808	1-249-417-11	CARBON	1K	5%	1/4W
R809	1-249-433-11	CARBON	22K	5%	1/4W
R810	1-247-850-11	CARBON	6. 2K	5%	1/4W
R811	1-249-433-11	CARBON	22K	5%	1/4W
R812	1-249-430-11	CARBON	12K	5%	1/4W
R813	1-249-429-11	CARBON	10K	5%	1/4W
R814	1-249-429-11	CARBON	10K	5%	1/4W
R815	1-249-434-11	CARBON	27K	5%	1/4W
R816	1-249-429-11	CARBON	10K	5%	1/4W
R818	1-249-434-11	CARBON	27K	5%	1/4W
R819	1-249-429-11	CARBON	10K	5%	1/4W
R820	1-249-421-11	CARBON	2. 2K	5%	1/4W
R821	1-249-421-11	CARBON	2. 2K	5%	1/4W
R822	1-249-422-11	CARBON	2. 7K	5%	1/4W

MAIN

PANEL

CONTROL (A)

CONTROL (B)

MD-A

Ref. No.	Part No.	Description	Remark
R823	1-249-422-11	CARBON 2.7K 5%	1/4W
R824	1-249-422-11	CARBON 2.7K 5%	1/4W
R825	1-249-425-11	CARBON 4.7K 5%	1/4W
R826	1-249-433-11	CARBON 22K 5%	1/4W
R827	1-249-429-11	CARBON 10K 5%	1/4W
R828	1-249-413-11	CARBON 470 5%	1/4W
R829	1-249-411-11	CARBON 330 5%	1/4W
R830	1-249-410-11	CARBON 270 5%	1/4W
R831	1-249-410-11	CARBON 270 5%	1/4W
R832	1-249-408-11	CARBON 180 5%	1/4W
R833	1-249-410-11	CARBON 270 5%	1/4W
R834	1-249-410-11	CARBON 270 5%	1/4W
R835	1-249-408-11	CARBON 180 5%	1/4W
R836	1-249-410-11	CARBON 270 5%	1/4W
R837	1-249-411-11	CARBON 330 5%	1/4W
R838	1-247-895-00	CARBON 470K 5%	1/4W
R839	1-247-895-00	CARBON 470K 5%	1/4W
R840	1-247-860-11	CARBON 16K 5%	1/4W
R841	1-249-431-11	CARBON 15K 5%	1/4W
R842	1-249-425-11	CARBON 4.7K 5%	1/4W
R843	1-247-862-11	CARBON 20K 5%	1/4W
R844	1-247-862-11	CARBON 20K 5%	1/4W
R845	1-249-425-11	CARBON 4.7K 5%	1/4W
R846	1-249-415-11	CARBON 680 5%	1/4W
R847	1-249-429-11	CARBON 10K 5%	1/4W
R848	1-249-415-11	CARBON 680 5%	1/4W
R849	1-249-429-11	CARBON 10K 5%	1/4W
R850	1-249-429-11	CARBON 10K 5%	1/4W
R851	1-249-437-11	CARBON 47K 5%	1/4W
R852	1-247-866-11	CARBON 30K 5%	1/4W
R853	1-247-866-11	CARBON 30K 5%	1/4W
R854	1-249-437-11	CARBON 47K 5%	1/4W
R855	1-247-872-11	CARBON 51K 5%	1/4W
R856	1-247-872-11	CARBON 51K 5%	1/4W
R857	1-247-872-11	CARBON 51K 5%	1/4W
R858	1-247-872-11	CARBON 51K 5%	1/4W
R859	1-249-405-11	CARBON 100 5%	1/4W
R860	1-249-405-11	CARBON 100 5%	1/4W
R899	1-249-393-11	CARBON 10 5%	1/4W
R901	1-249-407-11	CARBON 150 5%	1/4W
R902	1-249-409-11	CARBON 220 5%	1/4W
R903	1-249-411-11	CARBON 330 5%	1/4W
R904	1-249-413-11	CARBON 470 5%	1/4W
R905	1-249-415-11	CARBON 680 5%	1/4W
R906	1-249-417-11	CARBON 1K 5%	1/4W
R907	1-249-420-11	CARBON 1.8K 5%	1/4W
R908	1-249-424-11	CARBON 3.9K 5%	1/4W
R909	1-249-407-11	CARBON 150 5%	1/4W

Ref. No.	Part No.	Description	Remark
R910	1-249-409-11	CARBON 220 5%	1/4W
R911	1-249-411-11	CARBON 330 5%	1/4W
R912	1-249-413-11	CARBON 470 5%	1/4W
R913	1-249-415-11	CARBON 680 5%	1/4W
R914	1-249-417-11	CARBON 1K 5%	1/4W
R915	1-249-426-11	CARBON 5.6K 5%	1/4W
R916	1-249-430-11	CARBON 12K 5%	1/4W
R917	1-249-421-11	CARBON 2.2K 5%	1/4W

< VARIABLE RESISTOR >

RV101	1-241-630-11	RES. ADJ. CARBON 10K
RV201	1-241-630-11	RES. ADJ. CARBON 10K

< SWITCH >

S901	1-572-378-11	SWITCH, SLIDE (DIRECTION)
S902	1-572-378-11	SWITCH, SLIDE (DOLBY NR)
S903	1-554-303-21	SWITCH, TACTILE (A STOP)
S904	1-554-303-21	SWITCH, TACTILE (A FWD)
S905	1-554-303-21	SWITCH, TACTILE (A REV)
S906	1-554-303-21	SWITCH, TACTILE (B REW)
S907	1-554-303-21	SWITCH, TACTILE (B FF)
S908	1-554-303-21	SWITCH, TACTILE (B REC)
S909	1-554-303-21	SWITCH, TACTILE (DUB HIGH SPEED)
S910	1-554-303-21	SWITCH, TACTILE (DUB NORMAL SPEED)
S911	1-554-303-21	SWITCH, TACTILE (CD SYNCHRO)
S912	1-554-303-21	SWITCH, TACTILE (B STOP)
S913	1-554-303-21	SWITCH, TACTILE (B PAUSE)
S914	1-554-303-21	SWITCH, TACTILE (B FWD)
S915	1-554-303-21	SWITCH, TACTILE (B RVS)
S916	1-554-303-21	SWITCH, TACTILE (B REC MUTE)
S917	1-554-303-21	SWITCH, TACTILE (A REW)
S918	1-554-303-21	SWITCH, TACTILE (A FF)

< VIBRATOR >

X801	1-577-358-21	VIBRATOR, CERAMIC (4MHz)
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*	A-2006-399-A	MD-A BOARD, COMPLETE

< CAPACITOR >

C11	1-163-131-00	CERAMIC CHIP 390PF	5%	50V
C12	1-136-157-00	FILM 0.022uF	5%	50V
C13	1-124-234-00	ELECT 22uF	20%	16V
C18	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C21	1-163-131-00	CERAMIC CHIP 390PF	5%	50V
C22	1-136-157-00	FILM 0.022uF	5%	50V
C23	1-124-234-00	ELECT 22uF	20%	16V
C28	1-163-117-00	CERAMIC CHIP 100PF	5%	50V

MD-A

MD-B

Ref. No.	Part No.	Description	Remark
C31	1-124-234-00	ELECT 22uF	20% 16V
C32	1-124-234-00	ELECT 22uF	20% 16V
C72	1-124-499-11	ELECT, NONPOLAR 1uF	20% 50V

< CONNECTOR >

* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD	
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P	
* CNP32	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P	
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P	

< IC >

IC31	8-759-106-02	IC uPC4570G2	
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< CHIP JUMPER >

JW1	1-216-295-00	METAL CHIP 0	5% 1/10W
JW51	1-216-296-00	METAL CHIP 0	5% 1/8W
JW52	1-216-296-00	METAL CHIP 0	5% 1/8W
JW53	1-216-296-00	METAL CHIP 0	5% 1/8W
JW54	1-216-296-00	METAL CHIP 0	5% 1/8W

< TRANSISTOR >

Q71	8-729-602-36	TRANSISTOR 2SA1602	
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< RESISTOR >

R11	1-216-099-00	METAL CHIP 120K	5% 1/10W
R12	1-216-025-00	METAL CHIP 100	5% 1/10W
R13	1-216-100-00	METAL GLAZE 130K	5% 1/10W
R14	1-216-067-00	METAL CHIP 5.6K	5% 1/10W
R21	1-216-099-00	METAL CHIP 120K	5% 1/10W
R22	1-216-025-00	METAL CHIP 100	5% 1/10W
R23	1-216-100-00	METAL GLAZE 130K	5% 1/10W
R24	1-216-067-00	METAL CHIP 5.6K	5% 1/10W
R31	1-216-033-00	METAL CHIP 220	5% 1/10W
R32	1-216-033-00	METAL CHIP 220	5% 1/10W
R71	1-216-082-00	METAL GLAZE 24K	5% 1/10W
R72	1-216-081-00	METAL CHIP 22K	5% 1/10W
R73	1-216-089-00	METAL CHIP 47K	5% 1/10W
R74	1-216-089-00	METAL CHIP 47K	5% 1/10W

< VARIABLE RESISTOR >

RV11	1-238-012-11	RES. ADJ. CARBON 1K	
RV21	1-238-012-11	RES. ADJ. CARBON 1K	
RV71	1-238-016-11	RES. ADJ. CARBON 10K	
RV72	1-238-016-11	RES. ADJ. CARBON 10K	

Ref. No.	Part No.	Description	Remark
*	A-2006-400-A	MD-B BOARD, COMPLETE	

< CAPACITOR >

C11	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C12	1-136-157-00	FILM 0.022uF	5% 50V
C13	1-124-234-00	ELECT 22uF	20% 16V
C14	1-136-273-91	FILM 75PF	5% 630V
C15	1-164-080-11	CERAMIC 390PF	10% 50V
C17	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C18	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C21	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C22	1-136-157-00	FILM 0.022uF	5% 50V
C23	1-124-234-00	ELECT 22uF	20% 16V
C24	1-136-273-91	FILM 75PF	5% 630V
C25	1-164-080-11	CERAMIC 390PF	10% 50V
C27	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C28	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C31	1-124-234-00	ELECT 22uF	20% 16V
C32	1-124-234-00	ELECT 22uF	20% 16V
C33	1-124-234-00	ELECT 22uF	20% 16V
C51	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V
C52	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V
C53	1-163-022-00	CERAMIC CHIP 0.012uF	10% 50V
C54	1-136-559-11	FILM 0.0047uF	5% 630V
C56	1-164-505-11	CERAMIC CHIP 2.2uF	16V
C57	1-164-346-11	CERAMIC CHIP 1uF	16V
C58	1-163-024-00	CERAMIC CHIP 0.018uF	10% 50V
C72	1-124-499-11	ELECT, NONPOLAR 1uF	20% 50V

< CONNECTOR >

* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD	
* CNJ33	1-580-782-11	CONNECTOR, BOARD TO BOARD	
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P	
* CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P	
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P	

< DIODE >

D31	8-719-988-62	DIODE 1SS355	
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< IC >

IC31	8-759-106-02	IC uPC4570G2	
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< CHIP JUMPER >

JW1	1-216-296-00	METAL CHIP 0	5% 1/8W
JW2	1-216-295-00	METAL CHIP 0	5% 1/10W
JW3	1-216-295-00	METAL CHIP 0	5% 1/10W
JW4	1-216-295-00	METAL CHIP 0	5% 1/10W
JW5	1-216-295-00	METAL CHIP 0	5% 1/10W

MD-B

SW-A

SW-B

Ref. No.	Part No.	Description	Remark		
JW6	1-216-295-00	METAL CHIP	0	5%	1/10W
JW7	1-216-295-00	METAL CHIP	0	5%	1/10W
JW52	1-216-296-00	METAL CHIP	0	5%	1/8W
JW53	1-216-296-00	METAL CHIP	0	5%	1/8W
JW54	1-216-296-00	METAL CHIP	0	5%	1/8W
JW55	1-216-296-00	METAL CHIP	0	5%	1/8W
JW56	1-216-296-00	METAL CHIP	0	5%	1/8W
JW57	1-216-296-00	METAL CHIP	0	5%	1/8W
JW58	1-216-296-00	METAL CHIP	0	5%	1/8W
JW59	1-216-296-00	METAL CHIP	0	5%	1/8W
JW60	1-216-296-00	METAL CHIP	0	5%	1/8W
JW61	1-216-296-00	METAL CHIP	0	5%	1/8W
< COIL >					
L11	1-410-780-11	INDUCTOR	27mH		
L21	1-410-780-11	INDUCTOR	27mH		
< TRANSISTOR >					
Q51	8-729-808-01	TRANSISTOR	2SD1622-S		
Q52	8-729-808-01	TRANSISTOR	2SD1622-S		
Q53	8-729-808-01	TRANSISTOR	2SD1622-S		
Q71	8-729-602-36	TRANSISTOR	2SA1602		
< RESISTOR >					
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W
R12	1-216-025-00	METAL CHIP	100	5%	1/10W
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R14	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R15	1-249-430-11	CARBON	12K	5%	1/4W
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-025-00	METAL CHIP	100	5%	1/10W
R23	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R24	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R25	1-249-430-11	CARBON	12K	5%	1/4W
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
R41	1-249-393-11	CARBON	10	5%	1/4W
R42	1-249-393-11	CARBON	10	5%	1/4W
R51	1-216-075-00	METAL CHIP	12K	5%	1/10W
R52	1-216-075-00	METAL CHIP	12K	5%	1/10W
R53	1-216-073-00	METAL CHIP	10K	5%	1/10W
R54	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R55	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R56	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-00	METAL CHIP	47K	5%	1/10W
R74	1-216-089-00	METAL CHIP	47K	5%	1/10W

Ref. No.	Part No.	Description	Remark		
< VARIABLE RESISTOR >					
RV11	1-238-012-11	RES. ADJ. CARBON 1K			
RV12	1-238-551-11	RES. ADJ. CARBON 220K			
RV21	1-238-012-11	RES. ADJ. CARBON 1K			
RV22	1-238-551-11	RES. ADJ. CARBON 220K			
RV71	1-238-016-11	RES. ADJ. CARBON 10K			
RV72	1-238-016-11	RES. ADJ. CARBON 10K			
< RELAY >					
RY31	1-515-726-11	RELAY			
< COIL >					
T51	1-406-419-11	COIL, BIAS OSCILLATION			

*	1-634-841-14	SW-A BOARD			

	3-343-419-01	HOLDER (S SENSER A)			
< CONNECTOR >					
* CNP81	1-568-852-11	SOCKET, CONNECTOR 9P			
< IC >					
IC81	8-719-710-03	DIODE NJL5165K-B			
< RESISTOR >					
R84	1-249-417-11	CARBON	1K	5%	1/4W
R85	1-249-408-11	CARBON	180	5%	1/4W
< SWITCH >					
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP)			
S82	1-571-281-21	SWITCH, LEAF (70EQ)			
S86	1-571-281-21	SWITCH, LEAF (HALF)			

*	1-634-841-14	SW-B BOARD			

	3-343-419-01	HOLDER (S SENSER A)			
< CONNECTOR >					
* CNP81	1-568-852-11	SOCKET, CONNECTOR 9P			
< IC >					
IC81	8-719-710-03	DIODE NJL5165K-B			

Ref. No.	Part No.	Description	Remark
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< RESISTOR >

R81	1-249-414-11	CARBON	560 5% 1/4W
R82	1-247-818-11	CARBON	300 5% 1/4W
R83	1-247-834-11	CARBON	1.3K 5% 1/4W
R84	1-249-417-11	CARBON	1K 5% 1/4W
R85	1-249-408-11	CARBON	180 5% 1/4W

< SWITCH >

S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP)
S82	1-571-281-21	SWITCH, LEAF (70EQ)
S83	1-571-281-21	SWITCH, LEAF (METAL)
S84	1-571-281-21	SWITCH, LEAF (REC A)
S85	1-571-281-21	SWITCH, LEAF (REC B)

S86	1-571-281-21	SWITCH, LEAF (HALF)
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MISCELLANEOUS

57	1-590-237-11	WIRE, FLAT TYPE (19 CORE)
71	1-690-906-11	WIRE (FLAT TYPE) (9 CORE)
121	1-638-983-11	MOTOR FLEXIBLE BOARD
HP901	A-2003-837-A	BASE ASSY, HEAD (PB) (DECK A)
HRPE901A	2003-838-A	BASE ASSY, HEAD (REC/PB/ERASE) (DECK B)

M901A	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK A)
M901B	X-3359-417-1	MOTOR ASSY (CAPSTAN) (DECK B)
M902A	X-3363-501-1	MOTOR ASSY (REEL) (DECK A)
M902B	X-3363-501-1	MOTOR ASSY (REEL) (DECK B)

ACCESSORIES & PACKING MATERIALS

*	3-350-154-01	CUSHION
	4-920-940-01	SHEET (A), PROTECTION

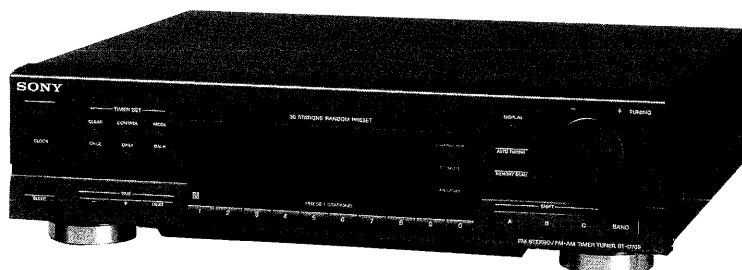
HARDWARE LIST

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#2	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S
#3	7-621-773-93	SCREW (PANEL 2.6 TP2)
#4	7-621-775-00	SCREW +B 2.6X3
#5	7-627-556-08	SCREW +P 2.6X2.8

ST-D709

SERVICE MANUAL

*AEP Model
UK Model
E Model
Australian Model
Tourist Model*



This set is the tuner section in
LBT-A57CD/A57CDM/A67CD/A67CDM/A77CD/A77CDM
/D509CD/D559CD/D609CD/D709CD/D759CD.

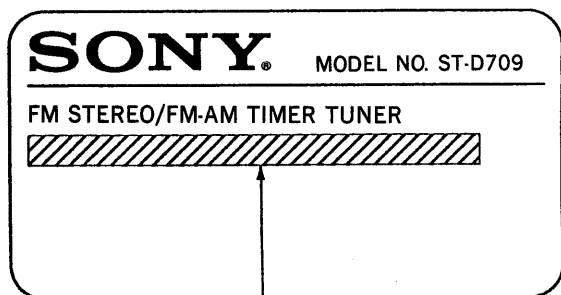
SPECIFICATIONS

System	FM stereo FM/AM superheterodyne tuner	Power consumption	AEP, G, IT, EE model 11W UK, E, AUS, EA, MY, SP, JE model 10W
FM tuner section		AC outlet	2 switched, total 450W max.
Tuning range	except for EE model 87.5 to 108 MHz EE model FM1: 65 to 74MHz FM2: 87.5 to 108MHz	Weight	Approx. 2.7kg (6 lbs)
Antenna	75 ohms unbalanced 300Ω balanced (E, AUS, EA, MY, SP, JE)	Dimensions	AEP, G, IT, EE model Approx. 355×95×330mm (14×3 ⁹ / ₄ ×12 ⁷ / ₈ inches) (w/h/d, including projections)
Intermediate frequency	10.7 MHz		UK, E, AUS, EA, MY, SP, JE model Approx. 355×95×340mm (14×3 ³ / ₄ ×13 ³ / ₄ inches (w/h/d, including projections)
AM tuner section			
Tuning range	AEP, UK, G, IT, EE model MW: 522 to 1,611kHz (IT) 531 to 1,602kHz (AEP, UK, G, EE) LW: 153 to 279kHz (AEP, UK, EE) E, AUS, EA, MY, SP, JE model AM: 531 to 1,602kHz (at 9kHz interval) 530 to 1,700kHz (at 10kHz interval)	Design and specifications are subject to change without notice.	
Antenna	AM loop antenna External antenna terminal	• G : German model • IT : Italian model • EE : East European model • AUS: Australian model • EA : Saudi Arabia model • MY : Malaysia model • SP : Singapore model • JE : Tourist model	
Intermediate frequency	450 kHz		
Power requirements	AEP, G, IT, EE model 220—230V AC, 50/60Hz UK model 240V AC, 50/60Hz E, AUS, EA, MY, SP, JE model 120V/220V—240V AC, adjustable with the voltage selector, 50/60Hz		

FM STEREO/FM-AM TIMER TUNER
SONY®

MODEL IDENTIFICATION

—Model Number Portion—





AEP, G, IT EE model : AC: 220V—230V~50/60Hz 11W
 UK model : AC: 240V~50/60Hz
 E, AUS, EA, MY, SP, JE model: AC: 120V/220V—240V~50/60Hz

- G : German model
- IT : Italian model
- EE : East European model
- AUS: Australian model
- EA : Saudi Arabia model
- MY : Malaysia model
- SP : Singapore model
- JE : Tourist model

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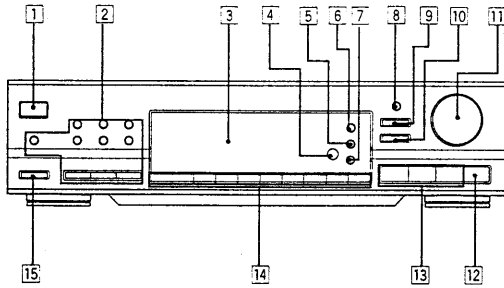
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1 GENERAL

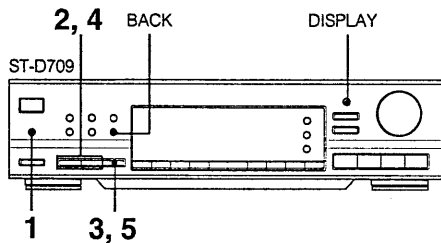
This section is extracted from instruction manual.

1-1. LOCATION OF CONTROLS



- 1 SYSTEM POWER switch
- 2 Buttons for setting the clock and timer
- 3 Display window
- 4 Remote sensor
- 5 ST/MUTE button
- 6 CHARACTER button
- 7 MEMORY button
- 8 DISPLAY button
- 9 AUTO TUNING button
- 10 MEMORY SCAN button
- 11 TUNING knob
- 12 BAND selector
- 13 SHIFT buttons (A, B, C)
- 14 Numeric buttons
- 15 SLEEP button

1-2. SETTING THE CLOCK



The built-in clock shows the time in the display. Set the clock correctly to enjoy timer-activated features (pages 112 and 114).

The time is shown in the 24-hour system.

1 Press the CLOCK button.

2 Set the hour with the TIME – or + button.

3 Press the NEXT button.

4 Set the minute with the TIME – or + button.

5 Press the NEXT button.
The built-in clock starts operating.

To make corrections

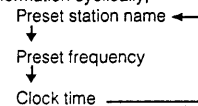
The indication which is blinking can be altered. To make the hour indication blink, press the BACK button.

To reset the clock

Repeat the procedure above.

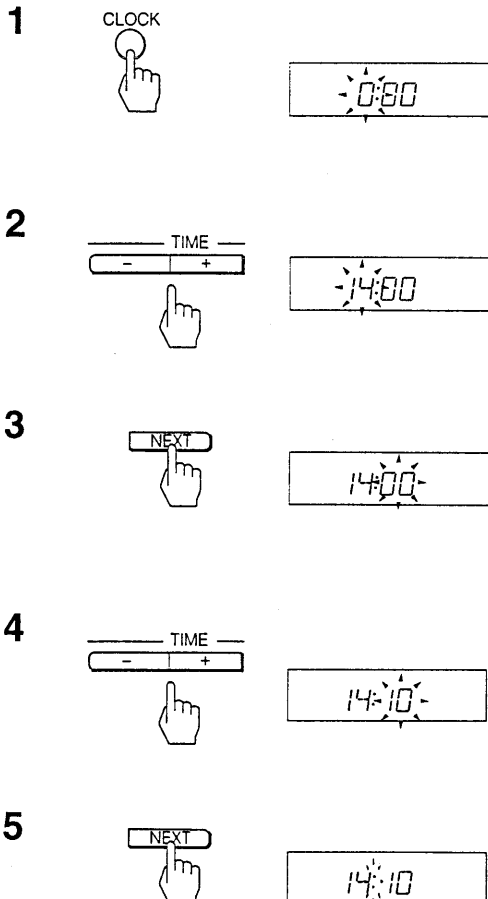
To switch among the clock time, preset station name and preset frequency display

Each time you press the DISPLAY button, the display changes to give you following information cyclically;



If a power failure occurs

The clock will start running again after the power is supplied. However, since the clock will not run during the power failure, it may be necessary to reset it.



SECTION 2 ELECTRICAL ADJUSTMENTS

Precautions in Repairing

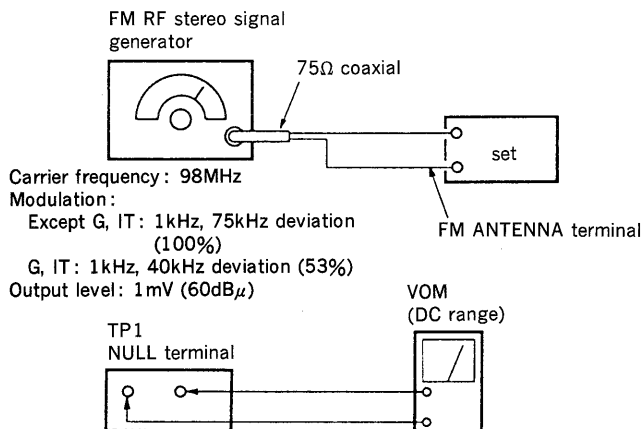
If the front end unit fails, it is difficult to repair the inner circuits, so replace the entire front end unit.

FM SECTION

FM Discriminator Adjustment (NULL Adjustment)

Setting :

BAND switch : FM



Procedure :

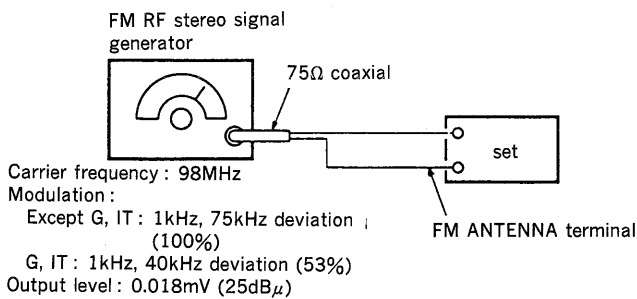
1. Tune the set to 98MHz.
2. Adjust T21 for 0V reading on the VOM.

Note : FM Tuning Level adjustment should be made after FM discriminator alignment.

FM Tuning Level Adjustment

Setting :

BAND switch : FM



Procedure :

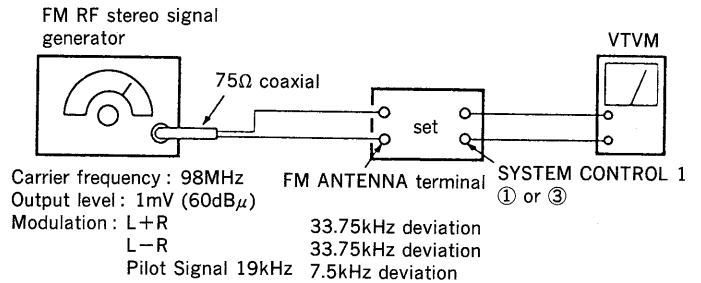
1. Tune the set to 98MHz.
2. Adjust RV24 so that the TUNED indicator goes on.

- G : German model
- IT : Italian model

FM Stereo Separation Adjustment

Setting :

BAND switch : FM



Procedure :

Tune the set to 98MHz.

FM stereo Signal generator Output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV21 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV21 for minimum reading.

L-CH Stereo separation : Ⓐ—Ⓑ

R-CH Stereo separation : Ⓒ—Ⓓ

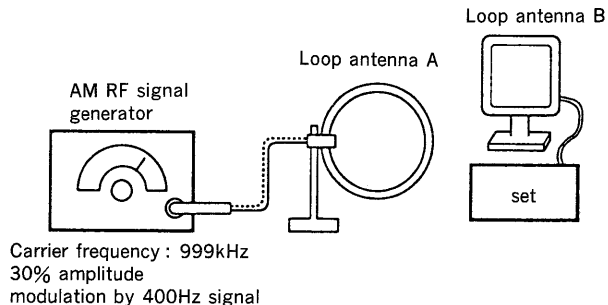
The separations of both channels should be equal.

AM SECTION

AM Tuning Level Adjustment

Setting :

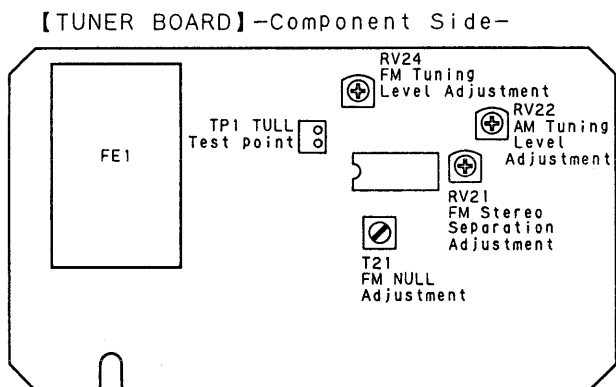
BAND switch : AM or MW



Procedure :

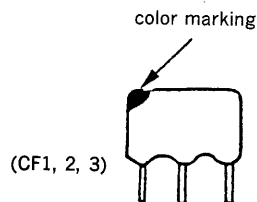
1. Set loop antenna A so that the loop antenna B input level becomes $58\text{dB}\mu/\text{m}$ ($0.8\text{mV}/\text{m}$)
2. Tune the set to 999kHz.
3. Adjust the RV22 so that the TUNED indicator goes on.

Adjustment Location :



Note on Ceramic Filter (CF1, 2, 3) Replacement

This set employs three ceramic filters (CF1, 2, 3) which should have the same color marking to identify their center frequency. Therefore FM IF offset adjustment by D609, D610 mounted is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.



(CF3: G, IT model only)

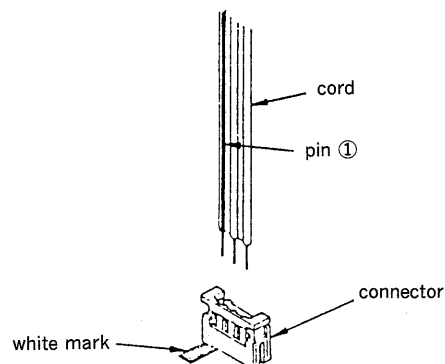
○ : Mounted
× : not Mounted

Ceramic filter		Mount		FM intermediate frequency (MHz)
Color mark	Center frequency (MHz)	* A D610	* B D609	
White	10.750	×	○	10.750
Red	10.700	○	○	10.700
Black	10.650	○	×	10.650

FM intermediate frequency is determined by the three types as shown above. Ceramic filters of same center frequency, i. e., of same color coding should be used for CF1, CF2 and CF3. When replacing the ceramic filters, perform the FM Discriminator Adjustment.

[Note on Inserting the Cord to the Connector on Tuner Board]

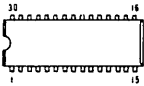
- Insert the cord to the connector fitting Pin ① of the cord in accordance with the white mark on the board at the connector as shown in the figure.



SECTION 3
DIAGRAMS

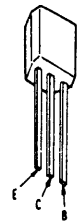
3-1. SEMICONDUCTOR LEAD LAYOUTS

LA1851N

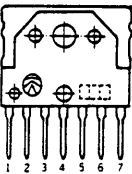


(TOP VIEW)

DTA114ES
DTC114ES
DTC124ES
2SC2603-EF
2SC2669-OY

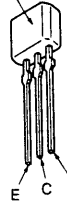


LA5667

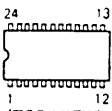


2SA1175-HFE
2SC2785-HFE
2SC3113-AB

letter side



LC7218

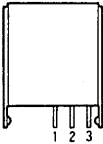


(TOP VIEW)

2SB1116A-L



SBX1610-59

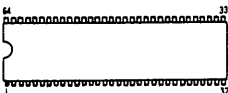


- 1. VCC
- 2. VOUT
- 3. GND

2SK246-GR3

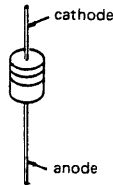


TMP47C1270AN-H211

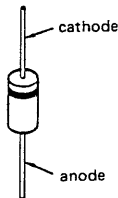


(TOPVIEW)

HZS30-2L



UZP-5.6B
1N4148M
10E2N



● Semiconductor Location

TUNER BOARD

E, AUS, EA MY,SP, JE model

TUNER BOARD

AEP, UK, EE model

Ref. No.	Location
D21	D-8
D22	D-8
D23	D-8
D24	D-8
IC21	D-6
IC81	B-4
Q1	C-4
Q2	C-5
Q21	C-7
Q22	C-7
Q23	C-5
Q24	C-5
Q26	E-7
Q27	D-8
Q28	D-8
Q81	C-5
Q82	C-5
Q83	B-3
Q84	B-2

Ref. No.	Location
D21	D-17
D22	D-17
D23	D-17
D24	D-17
D61	D-14
IC21	D-15
IC81	B-13
Q1	C-13
Q2	C-13
Q21	C-16
Q22	C-16
Q23	C-14
Q24	C-14
Q26	E-16
Q27	C-17
Q28	D-17
Q61	D-13
Q62	D-3
Q63	E-13
Q64	D-13
Q65	D-14
Q66	D-13
Q81	C-14
Q82	C-14
Q83	B-12
Q84	B-11
Q85	C-11
Q86	C-11

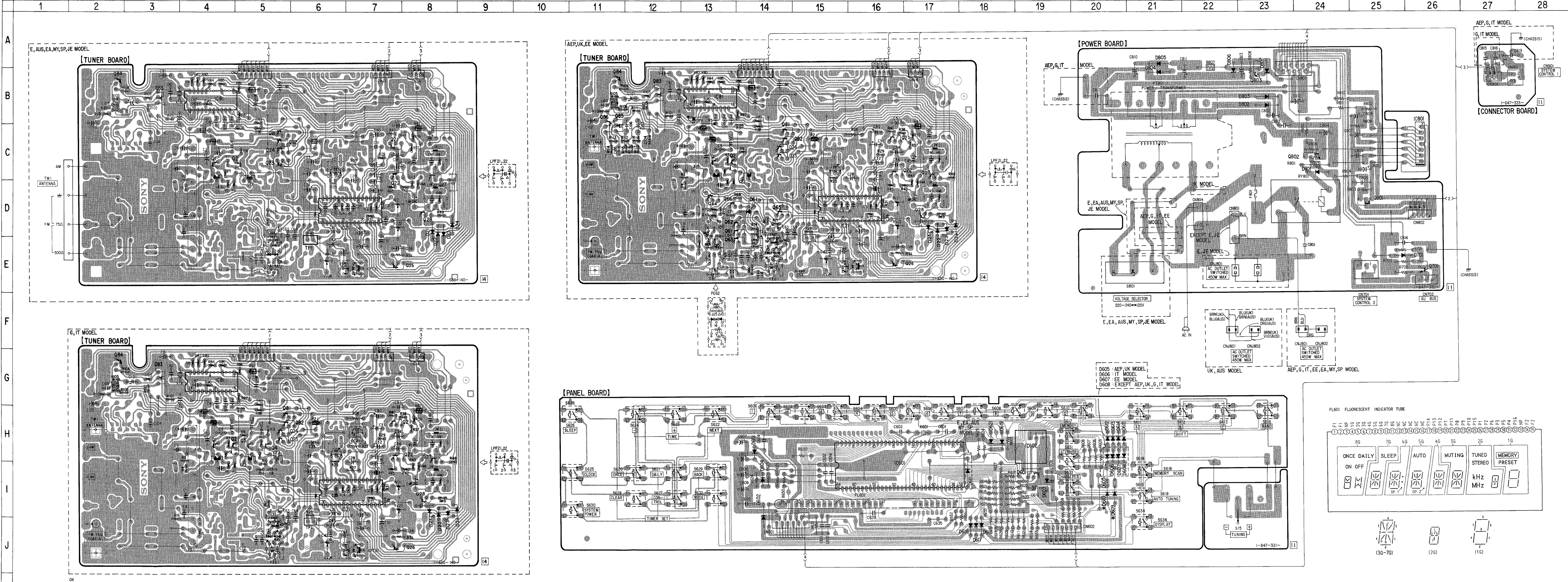
TUNER BOARD

G, IT model

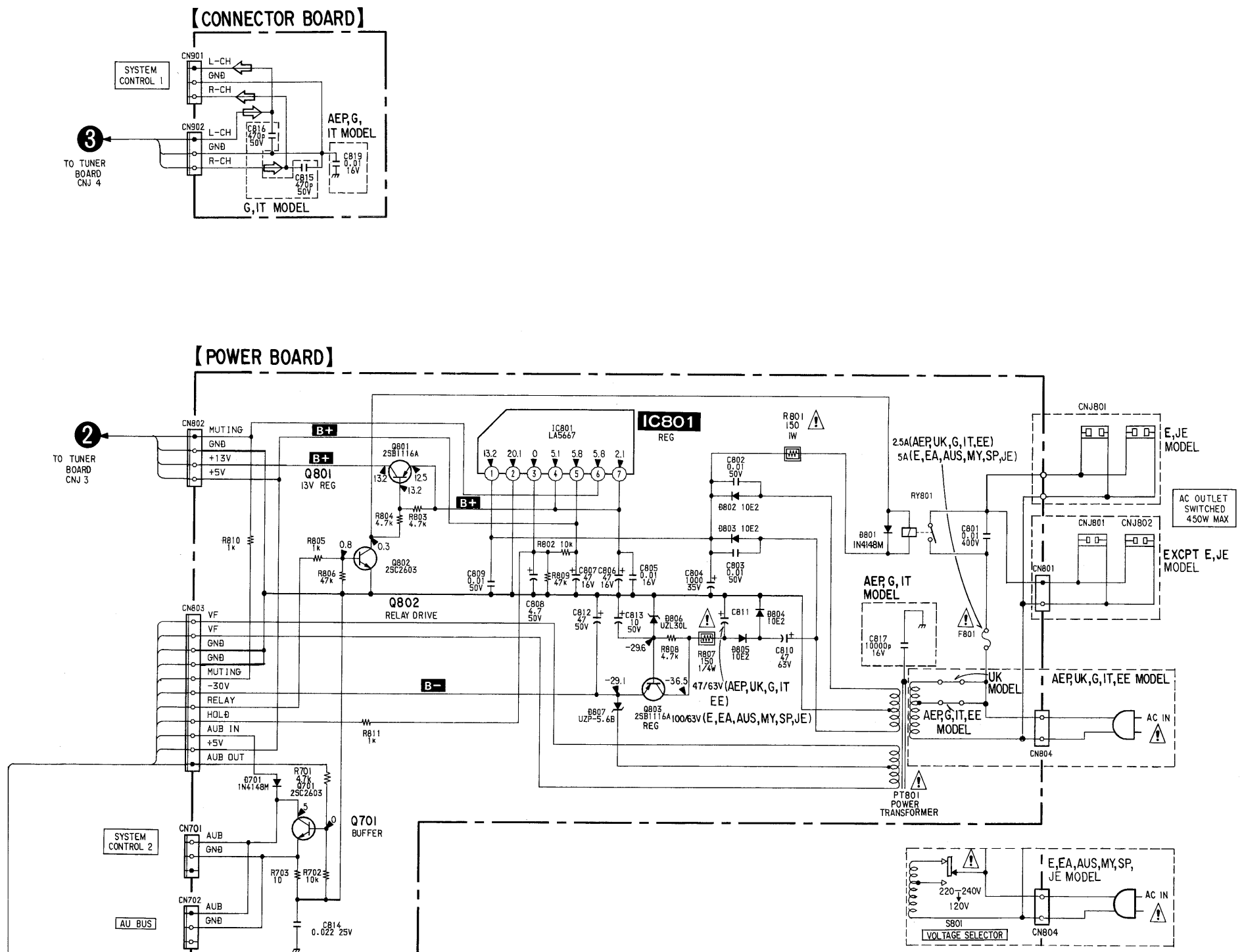
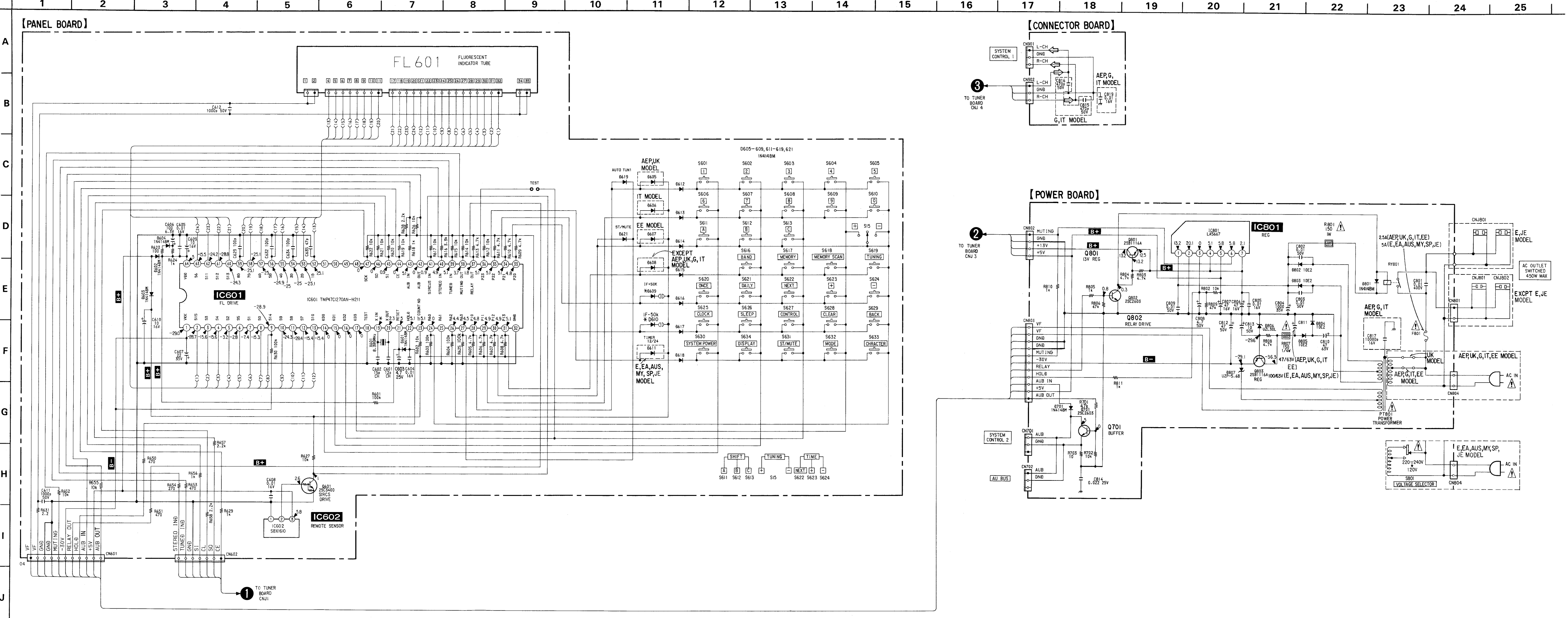
Ref. No.	Location
D21	I-8
D22	I-8
D23	I-8
D24	I-8
IC21	I-6
IC81	G-4
Q1	H-4
Q2	H-4
Q3	H-5
Q4	H-5
Q21	H-7
Q22	H-7
Q23	H-5
Q24	H-5
Q26	J-7
Q27	H-8
Q28	I-8
Q81	H-5
Q82	H-5
Q83	G-3
Q84	G-2

- Note:
- : parts extracted from the component side.
 - : parts extracted from the conductor side.
 - G : German model
 - IT : Italian model
 - EE : East European model
 - AUS : Australian model
 - EA : Saudi Arabia model
 - MY : Malaysia model
 - SP : Singapore model
 - JE : Tourist model

3-2. PRINTED WIRING BOARDS ● Refer to page 6 for Semiconductor Lead Layouts.

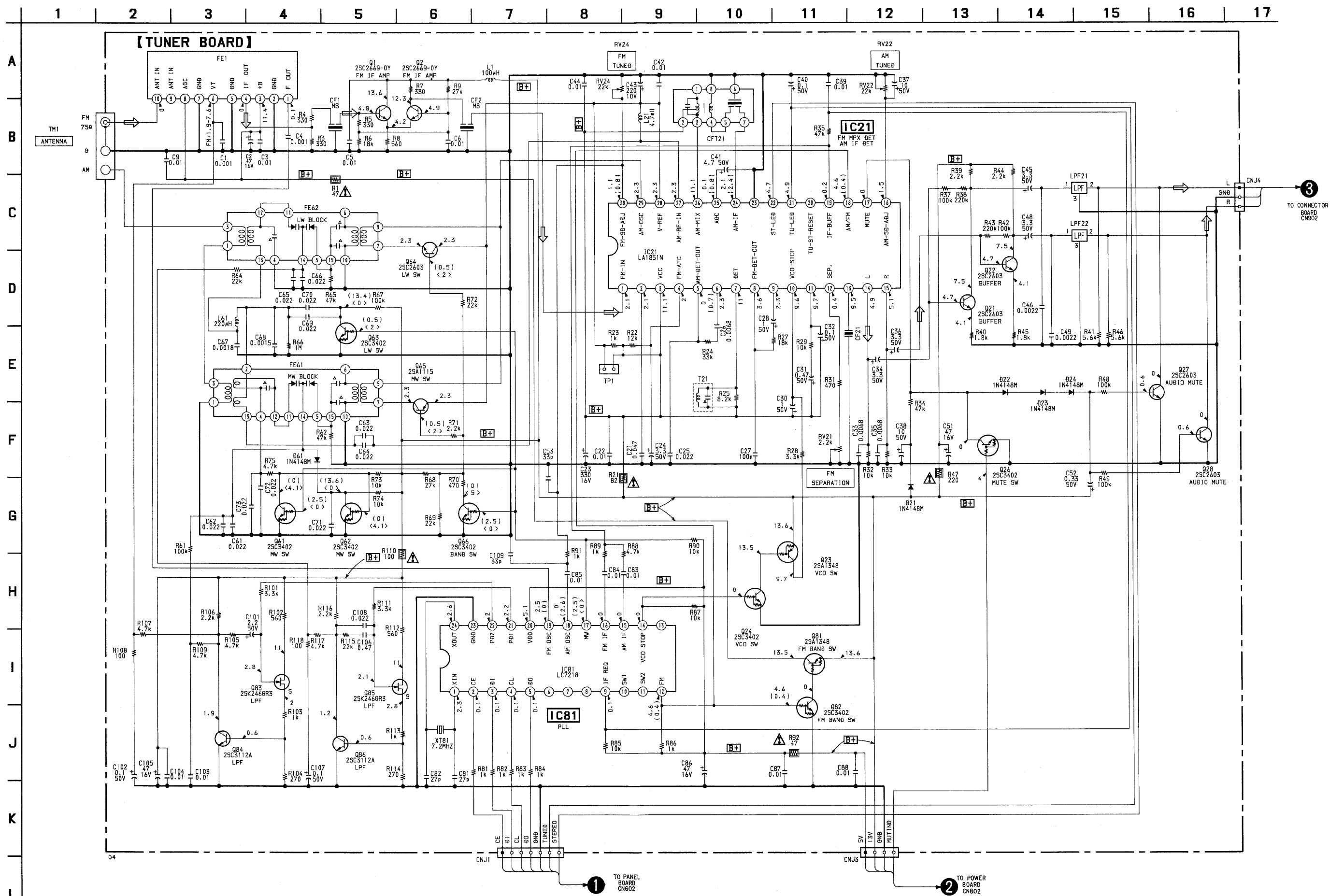


3-3. SCHEMATIC DIAGRAM—PANEL SECTION—

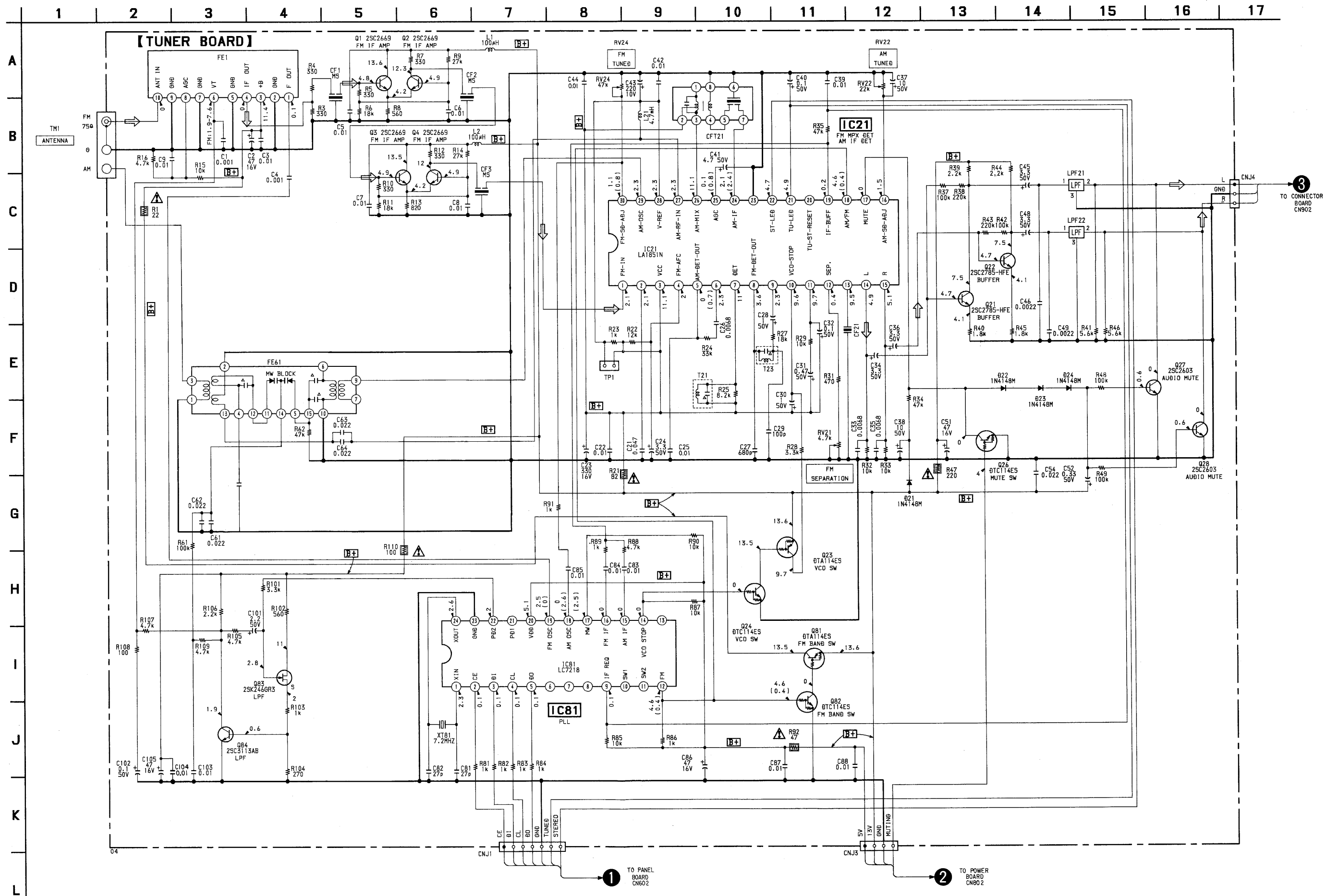


- Note:**
- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
 - : nonflammable resistor.
- Note:** The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
 - Voltages are taken with a VOM (Input Impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
 - Signal path.
 : FM
 - G : German model
 - IT : Italian model
 - EE : East European model
 - AUS : Australian model
 - EA : Saudi Arabia model
 - MY : Malaysia model
 - SP : Singapore model
 - JE : Tourist model

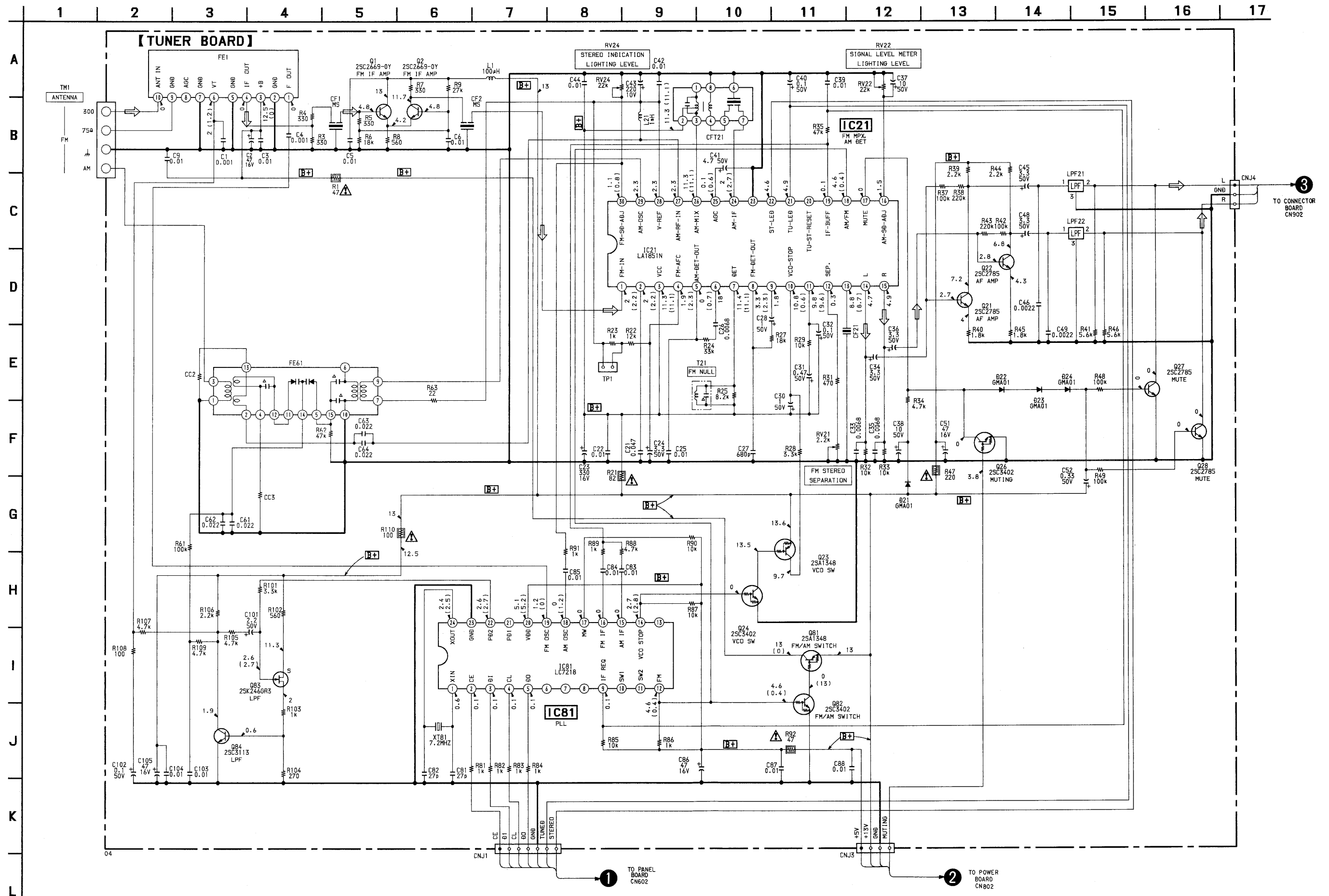
3-4. SCHEMATIC DIAGRAM—TUNER SECTION (AEP, UK, EE model)— • Refer to page 21 for IC Block Diagrams and Note.



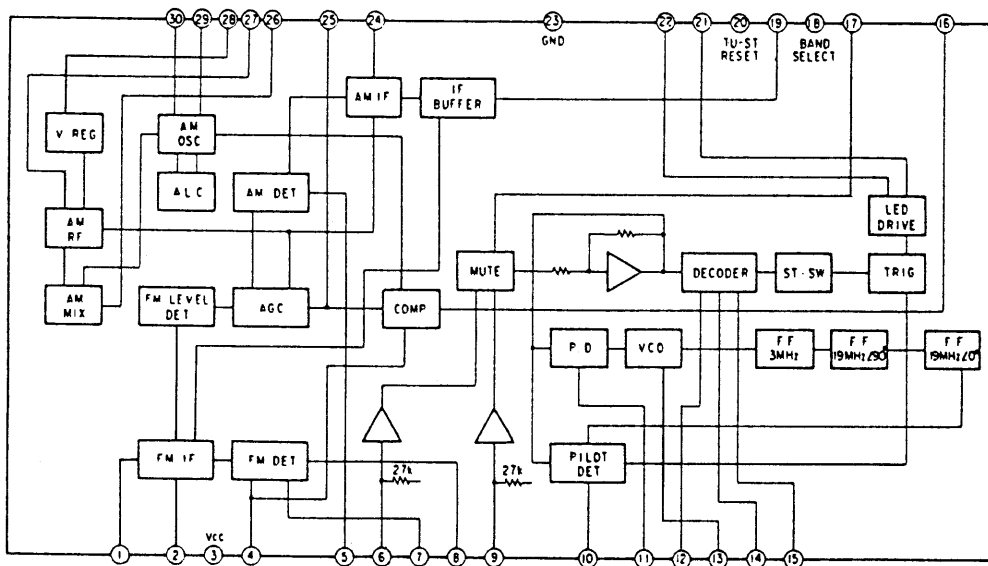
3-5. SCHEMATIC DIAGRAM—TUNER SECTION (G, IT model)— • Refer to page 21 for IC Block Diagrams and Note.



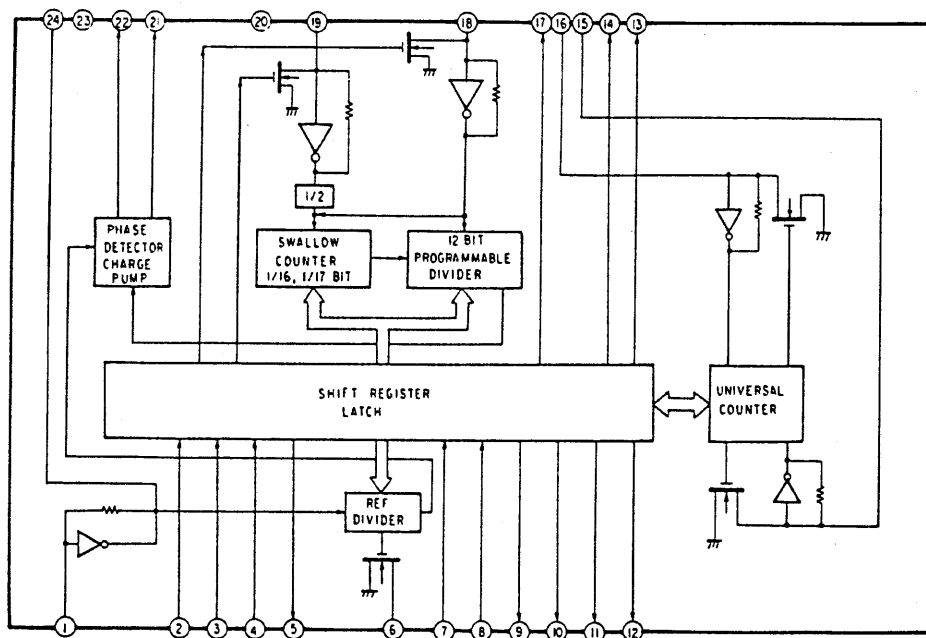
3-6. SCHEMATIC DIAGRAM—TUNER SECTION (E, AUS, EA, MY, SP, JE model)—• Refer to page 21 for IC Block Diagrams and Note.



● IC Block Diagrams
IC21 LA1851N



IC81 LC7218



Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF : μF 50V or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- \triangle : internal component.
- \square : nonflammable resistor.

Note: The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

- \square : adjustment for repair.

- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM
() : AM or MW
< > : LW
- Voltages are taken with a VOM (Input Impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
- Signal path.
 \Rightarrow : FM
- G : German model
- IT : Italian model
- EE : East European model
- AUS: Australian model
- EA : Saudi Arabia model
- MY : Malaysia model
- SP : Singapore model
- JE : Tourist model

SECTION 4 EXPLODED VIEW



NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

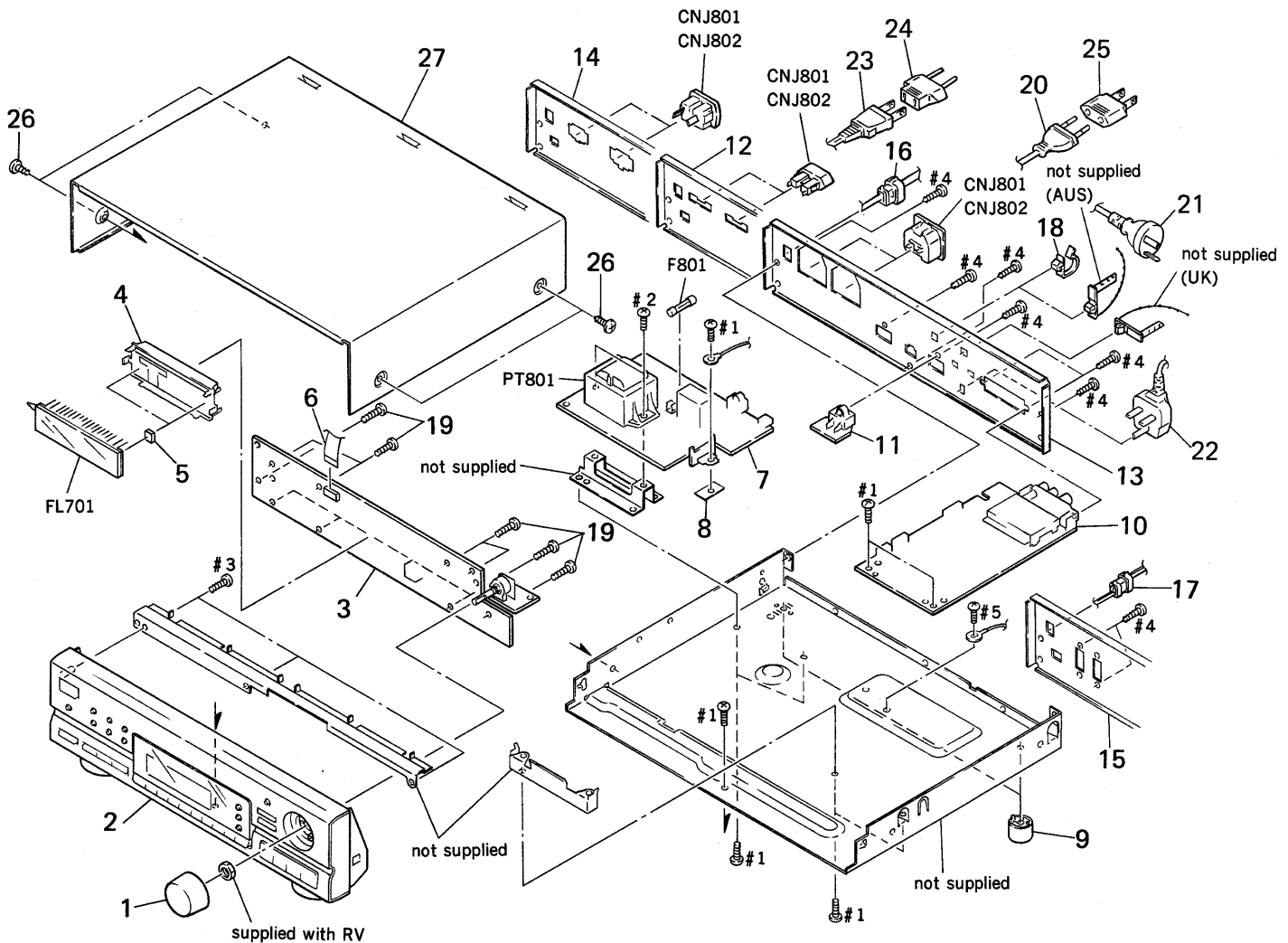
- -XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts
Example :
KNOB, BALANCE (WHITE)... (RED)
 ↑ ↑
 Parts Color Cabinet's Color

- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark  or dotted line with mark.  are critical for safety. Replace only with part number specified.

- G : German model
- IT : Italian model
- EE : East European model
- EA : Saudi Arabia model
- AUS : Australian model
- MY : Malaysia model
- SP : Singapore model
- JE : Tourist model



Ref. No.	Part No.	Description	Remark
1	4-930-861-21	KNOB (AEP, E, EE, EA, AUS, MY, SP, JE)	
1	4-930-861-31	KNOB (UK, G, IT)	
2	X-4943-391-2	PANEL ASSY (709), FRONT (AEP, E, EE, EA, AUS, MY, SP, JE)	
2	X-4943-452-2	PANEL ASSY (709), FRONT (UK, G, IT)	
* 3	A-4360-057-A	PANEL BOARD, COMPLETE (AEP)	
* 3	A-4360-058-A	PANEL BOARD, COMPLETE (EE)	
* 3	A-4360-059-A	PANEL BOARD, COMPLETE (E, EA, AUS, MY, SP, JE)	
* 3	A-4360-060-A	PANEL BOARD, COMPLETE (IT)	
* 3	A-4360-061-A	PANEL BOARD, COMPLETE (UK)	
* 3	A-4360-062-A	PANEL BOARD, COMPLETE (G)	
* 4	4-923-103-01	HOLDER, FL TUBE	
* 5	4-921-941-01	CUSHION (FL)	
6	1-575-666-11	WIRE, FLAT TYPE (11 CORE)	
* 7	A-4360-052-A	POWER BOARD, COMPLETE (AEP, EE)	
* 7	A-4360-053-A	POWER BOARD, COMPLETE (EA, AUS)	
* 7	A-4360-054-A	POWER BOARD, COMPLETE (E, JE)	
* 7	A-4360-055-A	POWER BOARD, COMPLETE (UK)	
* 7	A-4360-056-A	POWER BOARD, COMPLETE (G, IT)	
* 7	A-4360-634-A	POWER BOARD, COMPLETE (MY, SP)	
* 8	4-937-354-01	SHEET	
9	4-931-169-01	FOOT	
* 10	A-4347-288-A	TUNER (3SJ) BOARD, COMPLETE (AEP, UK)	
* 10	A-4360-063-A	TUNER (2RJ) BOARD, COMPLETE (G, IT)	
* 10	A-4347-287-A	TUNER (2QJ) BOARD, COMPLETE (E, AUS, EA, MY, SP, JE)	
* 10	A-4347-290-A	TUNER (3UJ) BOARD, COMPLETE (EE)	
* 11	1-647-333-11	CONNECTOR BOARD	
* 12	4-956-867-11	PANEL, BACK (AEP:MADE IN JAPAN, EE)	
* 12	4-956-867-32	PANEL, BACK (G)	
* 12	4-956-867-41	PANEL, BACK (IT)	
* 12	4-956-867-71	PANEL, BACK (EA, MY, SP)	
* 12	4-956-867-91	PANEL, BACK (AEP:MADE IN FRANCE)	

Ref. No.	Part No.	Description	Remark
* 13	4-956-867-21	PANEL, BACK (UK)	
* 14	4-956-867-51	PANEL, BACK (AUS)	
* 15	4-956-867-61	PANEL, BACK (E, JE)	
* 16	3-703-244-00	BUSHING (2104), CORD (AEP, UK, G, IT, EE, EA, AUS, MY, SP)	
* 17	3-703-571-11	BUSHING (S) (4516), CORD (E, JE)	
* 18	4-949-235-01	HOOK (AEP, UK, E, G, IT, EE, EA, MY, SP, JE)	
19	4-951-620-01	SCREW (2. 6X8), +BVTP	
△20	1-575-651-11	CORD, POWER (AEP, EE, EA, MY, SP)	
△20	1-575-651-21	CORD, POWER (G, IT)	
△21	1-690-608-11	CORD, POWER (AUS)	
△22	1-696-907-11	CORD, POWER (UK)	
△23	1-575-653-11	CORD, POWER (E, JE)	
△24	1-569-007-11	ADAPTER, CONVERSION 2P (E3, JE)	
△25	1-569-008-11	ADAPTER, CONVERSION 2P (EA, MY, SP)	
26	3-363-099-01	SCREW (CASE 3 TP2)	
* 27	4-939-802-31	CASE	
△CNJ801	1-251-078-11	OUTLET, AC. (AUS)	
△CNJ801	1-526-751-00	OUTLET, AC (UK)	
△CNJ801	1-526-794-11	OUTLET, AC (AEP, G, IT, EE, EA, MY, SP)	
△CNJ802	1-251-078-11	OUTLET, AC. (AUS)	
△CNJ802	1-526-751-00	OUTLET, AC (UK)	
△CNJ802	1-526-794-11	OUTLET, AC (AEP, G, IT, EE, EA, MY, SP)	
△F801	1-532-286-00	FUSE 2. 5A (UK, G, IT)	
△F801	1-532-299-00	FUSE 5A (E, EA, AUS, MY, SP, JE)	
△F801	1-576-229-31	FUSE (H. B. C.) 2. 5A (AEP, EE)	
FL701	1-519-728-11	INDICATOR TUBE, FLUORESCENT	
△PT801	1-449-978-11	TRANSFORMER, POWER (E, EA, AUS, MY, SP, JE)	
△PT801	1-449-979-11	TRANSFORMER, POWER (AEP, UK, G, IT, EE)	

SECTION 5 ELECTRICAL PARTS LIST

CONNECTOR

PANEL

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A... uPA...: μ PA...
uPB...: μ PB... uPC...: μ PC... uPD...: μ PD...
- CAPACITORS
uF: μ F
- COILS
uH: μ H

When indicating parts by reference number, please include the board.

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

- G : German model
- IT : Italian model
- EE : East European model
- EA : Saudi Arabia model
- AUS : Australian model
- MY : Malaysia model
- SP : Singapore model
- JE : Tourist model

Ref. No.	Part No.	Description	Remark			
*	1-647-333-11	CONNECTOR BOARD *****				
		< CAPACITOR >				
C815	1-164-081-11	CERAMIC (G, IT)	470PF	10%	50V	
C816	1-164-081-11	CERAMIC (G, IT)	470PF	10%	50V	
C819	1-161-379-00	CERAMIC (AEP, G, IT)	0.01uF	20%	25V	
		< CONNECTOR >				
* CN901	1-569-625-41	SOCKET, CONNECTOR 3P (SYSTEM CONTROL 1)				
CN902	1-568-269-11	SOCKET, CONNECTOR 3P *****				
*	A-4360-057-A	PANEL BOARD, COMPLETE (AEP)				
*	A-4360-058-A	PANEL BOARD, COMPLETE (EE)				
*	A-4360-059-A	PANEL BOARD, COMPLETE (E, EA, AUS, MY, SP, JE)				
*	A-4360-060-A	PANEL BOARD, COMPLETE (IT)				
*	A-4360-061-A	PANEL BOARD, COMPLETE (UK)				
*	A-4360-062-A	PANEL BOARD, COMPLETE (G) *****				
*	4-921-941-01	CUSHION (FL)				
*	4-923-103-01	HOLDER, FL TUBE				
		< CAPACITOR >				
C601	1-162-201-31	CERAMIC	12PF	5%	50V	
C602	1-162-203-31	CERAMIC	15PF	5%	50V	
C603	1-126-163-11	ELECT	4.7uF	20%	50V	
C604	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C605	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C606	1-126-177-11	ELECT	100uF	20%	10V	
C607	1-124-916-11	ELECT	22uF	20%	63V	
C608	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C609	1-126-157-11	ELECT	10uF	20%	16V	
C610	1-126-157-11	ELECT	10uF	20%	16V	
C611	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C612	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C629	1-162-282-31	CERAMIC	100PF	10%	50V	

Ref. No.	Part No.	Description	Remark			
C632	1-162-282-31	CERAMIC	100PF	10%	50V	
C634	1-162-282-31	CERAMIC	100PF	10%	50V	
C635	1-162-215-31	CERAMIC	47PF	5%	50V	
		< CONNECTOR >				
* CN601	1-568-854-11	SOCKET, CONNECTOR 11P				
* CN602	1-568-273-11	SOCKET, CONNECTOR 7P				
		< DIODE >				
D601	8-719-987-63	DIODE 1N4148M				
D602	8-719-987-63	DIODE 1N4148M				
D603	8-719-987-63	DIODE 1N4148M				
D604	8-719-987-63	DIODE 1N4148M				
D605	8-719-987-63	DIODE 1N4148M (AEP, UK)				
D606	8-719-987-63	DIODE 1N4148M (IT)				
D607	8-719-987-63	DIODE 1N4148M (EE)				
D608	8-719-987-63	DIODE 1N4148M (E, EE, EA, AUS, MY, SP, JE)				
D609	8-719-987-63	DIODE 1N4148M				
D610	8-719-987-63	DIODE 1N4148M				
D611	8-719-987-63	DIODE 1N4148M (E, EA, AUS, MY, SP, JE)				
D612	8-719-987-63	DIODE 1N4148M				
D613	8-719-987-63	DIODE 1N4148M				
D614	8-719-987-63	DIODE 1N4148M				
D615	8-719-987-63	DIODE 1N4148M				
D616	8-719-987-63	DIODE 1N4148M				
D617	8-719-987-63	DIODE 1N4148M				
D618	8-719-987-63	DIODE 1N4148M				
D619	8-719-987-63	DIODE 1N4148M				
D621	8-719-987-63	DIODE 1N4148M				
		< FLUORESCENT INDICATOR >				
FL601	1-519-728-11	INDICATOR TUBE, FLUORESCENT				
		< IC >				
IC601	8-759-157-67	IC TMP47C1270AN-H211				
IC602	8-741-100-48	IC SBX1610-59				
		< TRANSISTOR >				
Q601	8-729-900-36	TRANSISTOR DTC124ES				

Ref. No.	Part No.	Description	Remark
< RESISTOR >			
R601	1-249-441-11	CARBON 100K 5% 1/4W	
R602	1-249-429-11	CARBON 10K 5% 1/4W	
R603	1-249-441-11	CARBON 100K 5% 1/4W	
R604	1-249-441-11	CARBON 100K 5% 1/4W	
R605	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R606	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R607	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R608	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R609	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R610	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R611	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R612	1-249-429-11	CARBON 10K 5% 1/4W	
R613	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R614	1-249-429-11	CARBON 10K 5% 1/4W	
R615	1-249-429-11	CARBON 10K 5% 1/4W	
R616	1-249-423-11	CARBON 3.3K 5% 1/4W F	
R617	1-249-429-11	CARBON 10K 5% 1/4W	
R618	1-249-417-11	CARBON 1K 5% 1/4W F	
R619	1-249-429-11	CARBON 10K 5% 1/4W	
R620	1-249-429-11	CARBON 10K 5% 1/4W	
R621	1-249-429-11	CARBON 10K 5% 1/4W	
R622	1-249-429-11	CARBON 10K 5% 1/4W	
R623	1-249-405-11	CARBON 100 5% 1/4W F	
R624	1-249-417-11	CARBON 1K 5% 1/4W F	
R625	1-249-441-11	CARBON 100K 5% 1/4W	
R626	1-249-429-11	CARBON 10K 5% 1/4W	
R627	1-249-429-11	CARBON 10K 5% 1/4W	
R628	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R629	1-249-417-11	CARBON 1K 5% 1/4W F	
R630	1-249-441-11	CARBON 100K 5% 1/4W	
R631	1-249-385-11	CARBON 2.2 5% 1/6W F	
R650	1-249-413-11	CARBON 470 5% 1/4W F	
R651	1-249-413-11	CARBON 470 5% 1/4W F	
R652	1-249-429-11	CARBON 10K 5% 1/4W	
R653	1-249-413-11	CARBON 470 5% 1/4W F	
R654	1-249-410-11	CARBON 270 5% 1/4W F	
R655	1-249-429-11	CARBON 10K 5% 1/4W	
R656	1-249-417-11	CARBON 1K 5% 1/4W F	
R657	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R658	1-249-421-11	CARBON 2.2K 5% 1/4W F	

< SWITCH >

S15	1-571-955-11	SWITCH, ROTARY (TUNING)
S601	1-554-303-21	SWITCH, TACTILE (1)
S602	1-554-303-21	SWITCH, TACTILE (2)
S603	1-554-303-21	SWITCH, TACTILE (3)
S604	1-554-303-21	SWITCH, TACTILE (4)

Ref. No.	Part No.	Description	Remark
S605	1-554-303-21	SWITCH, TACTILE (5)	
S606	1-554-303-21	SWITCH, TACTILE (6)	
S607	1-554-303-21	SWITCH, TACTILE (7)	
S608	1-554-303-21	SWITCH, TACTILE (8)	
S609	1-554-303-21	SWITCH, TACTILE (9)	
S610	1-554-303-21	SWITCH, TACTILE (0)	
S611	1-554-303-21	SWITCH, TACTILE (SHIFT A)	
S612	1-554-303-21	SWITCH, TACTILE (SHIFT B)	
S613	1-554-303-21	SWITCH, TACTILE (SHIFT C)	
S616	1-554-303-21	SWITCH, TACTILE (BAND)	
S617	1-554-303-21	SWITCH, TACTILE (MEMORY)	
S618	1-554-303-21	SWITCH, TACTILE (MEMORY SCAN)	
S619	1-554-303-21	SWITCH, TACTILE (TUNING)	
S620	1-554-303-21	SWITCH, TACTILE (ONCE)	
S621	1-554-303-21	SWITCH, TACTILE (DAILY)	
S622	1-554-303-21	SWITCH, TACTILE (TIME NEXT)	
S623	1-554-303-21	SWITCH, TACTILE (TIME +)	
S624	1-554-303-21	SWITCH, TACTILE (TIME -)	
S625	1-554-303-21	SWITCH, TACTILE (CLOCK)	
S626	1-554-303-21	SWITCH, TACTILE (SLEEP)	
S627	1-554-303-21	SWITCH, TACTILE (CONTROL)	
S628	1-554-303-21	SWITCH, TACTILE (CLEAR)	
S629	1-554-303-21	SWITCH, TACTILE (BACK)	
S630	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)	
S631	1-554-303-21	SWITCH, TACTILE (ST/MUTE)	
S632	1-554-303-21	SWITCH, TACTILE (MODE)	
S633	1-554-303-21	SWITCH, TACTILE (CHRACTER)	
S634	1-554-303-21	SWITCH, TACTILE (DISPLAY)	

< VIBRATOR >

X601 1-579-564-11 VIBRATOR, CRYSTAL (8.389MHz)

*	A-4360-052-A	POWER BOARD, COMPLETE (AEP, EE)
*	A-4360-053-A	POWER BOARD, COMPLETE (EA, AUS)
*	A-4360-054-A	POWER BOARD, COMPLETE (E, JE)
*	A-4360-055-A	POWER BOARD, COMPLETE (UK)
*	A-4360-056-A	POWER BOARD, COMPLETE (G, IT)
*	A-4360-634-A	POWER BOARD, COMPLETE (MY, SP)

< CAPACITOR >

C801	1-161-744-00	CERAMIC 0.01uF	400V
C802	1-101-004-00	CERAMIC 0.01uF	50V
C803	1-101-004-00	CERAMIC 0.01uF	50V
C804	1-126-105-11	ELECT 1000uF	20% 35V
C805	1-161-379-00	CERAMIC 0.01uF	20% 25V
C806	1-126-022-11	ELECT 47uF	20% 16V
C807	1-126-022-11	ELECT 47uF	20% 16V
C808	1-126-163-11	ELECT 4.7uF	20% 50V

POWER

TUNER

Ref. No.	Part No.	Description	Remark
C809	1-101-004-00	CERAMIC 0.01uF	50V
C810	1-124-918-11	ELECT 47uF	20% 63V
C811	1-124-918-11	ELECT 47uF	20% 63V
	(AEP, UK, G, IT, EE)		
C811	1-124-572-11	ELECT 100uF	20% 63V
	(E, EA, AUS, MY, SP, JE)		
C812	1-124-910-11	ELECT 47uF	20% 50V
C813	1-126-059-11	ELECT 10uF	20% 50V
C814	1-161-494-00	CERAMIC 0.022uF	25V
C817	1-161-379-00	CERAMIC 0.01uF	20% 25V
	(AEP, G, IT)		

< CONNECTOR >

* CN701	1-569-625-11	SOCKET, CONNECTOR 3P (SYSTEM CONTROL 2)
* CN702	1-565-561-11	PIN, CONNECTOR 3P (AU BUS)
CN801	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P
	(EXCEPT E, JE)	
* CN802	1-568-308-11	SOCKET, CONNECTOR 4P
* CN803	1-568-830-11	SOCKET, CONNECTOR 11P
* CN804	1-564-321-00	PIN, CONNECTOR 2P
△CNJ801	1-540-041-11	OUTLET, AC (NONPOLAR) (2P) (AC OUTLET)
	(E, JE)	

< DIODE >

D701	8-719-987-63	DIODE 1N4148M
D801	8-719-987-63	DIODE 1N4148M
D802	8-719-200-77	DIODE 10E2N
D803	8-719-200-77	DIODE 10E2N
D804	8-719-200-77	DIODE 10E2N
D805	8-719-200-77	DIODE 10E2N
D806	8-719-934-22	DIODE HZS30-2L
D807	8-719-014-66	DIODE UZP-5.6B

< FUSE HOLDER >

* FH801	1-533-213-11	HOLDER, FUSE
* FH802	1-533-213-31	HOLDER, FUSE

< IC >

IC801	8-759-820-09	IC LA5667
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< TRANSISTOR >

Q701	8-729-620-05	TRANSISTOR 2SC2603-EF
Q801	8-729-140-04	TRANSISTOR 2SB1116A-L
Q802	8-729-620-05	TRANSISTOR 2SC2603-EF
Q803	8-729-140-04	TRANSISTOR 2SB1116A-L

< RESISTOR >

R701	1-249-425-11	CARBON 4.7K 5%	1/4W F
R702	1-249-429-11	CARBON 10K 5%	1/4W

Ref. No.	Part No.	Description	Remark
R703	1-249-393-11	CARBON 10 5%	1/4W F
△R801	1-215-864-00	METAL OXIDE 150 5%	1W F
R802	1-249-429-11	CARBON 10K 5%	1/4W
R803	1-249-425-11	CARBON 4.7K 5%	1/4W F
R804	1-249-425-11	CARBON 4.7K 5%	1/4W F
R805	1-249-417-11	CARBON 1K 5%	1/4W F
R806	1-249-437-11	CARBON 47K 5%	1/4W
△R807	1-247-702-11	CARBON 150 5%	1/4W
R808	1-249-425-11	CARBON 4.7K 5%	1/4W F
R809	1-249-437-11	CARBON 47K 5%	1/4W
R810	1-249-417-11	CARBON 1K 5%	1/4W F
R811	1-249-417-11	CARBON 1K 5%	1/4W F

< RELAY >

RY801	1-515-617-11	RELAY
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< SWITCH >

△S801	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE
	(VOLTAGE SELECTOR) (E, EA, AUS, MY, SP, JE)	

*	A-4347-287-A	TUNER (2QJ) BOARD, COMPLETE
	(E, EA, AUS, MY, SP, JE)	
*	A-4360-063-A	TUNER (2RJ) BOARD, COMPLETE (G, IT)
*	A-4347-288-A	TUNER (3SJ) BOARD, COMPLETE (AEP, UK)
*	A-4347-290-A	TUNER (3UJ) BOARD, COMPLETE (EE)

*	4-612-009-01	SPACER (A) (G, IT)
*	4-923-470-01	PLATE, SHIELD (G, IT)
*	4-930-855-01	SHEET (2P) (G, IT)
*	4-924-988-11	PLATE (ST), GROUND

< CAPACITOR >

C1	1-162-294-31	CERAMIC 1000PF	20% 25V
C2	1-124-477-11	ELECT 47uF	20% 25V
C3	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
C4	1-162-294-31	CERAMIC 1000PF	20% 25V
C5	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
C6	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
C7	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
	(G, IT)		
C8	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
	(G, IT)		
C9	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
C21	1-101-006-00	CERAMIC 0.047uF	50V
	(EXCEPT G, IT)		
C21	1-161-021-11	CERAMIC 0.047uF	10% 25V
	(G, IT)		
C22	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
C23	1-124-119-00	ELECT 330uF	20% 16V

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

TUNER

Ref. No.	Part No.	Description	Remark
C24	1-123-382-00	ELECT 3.3uF	20% 100V
C25	1-163-063-00	CERAMIC CHIP 22000PF (AEP, UK, EE)	25V
C25	1-163-059-00	CERAMIC CHIP 0.01uF (G, IT, E, EA, AUS, MY, SP, JE)	20% 16V
C26	1-163-019-00	CERAMIC CHIP 6800PF	20% 12V
C27	1-162-516-11	CERAMIC CHIP 100PF (AEP, UK, E, EE, EA, AUS, MY, SP, JE)	10% 50V
C27	1-162-521-11	CERAMIC CHIP 680PF (G, IT)	10% 50V
C28	1-124-903-11	ELECT 1uF	20% 50V
C29	1-216-516-11	CERAMIC CHIP 100PF (G, IT)	10% 50V
C30	1-124-903-11	ELECT 1uF	20% 50V
C31	1-124-902-00	ELECT 0.47uF	20% 50V
C32	1-124-463-00	ELECT 0.1uF	20% 50V
C33	1-130-481-00	MYLAR 0.0068uF	5% 50V
C34	1-123-382-00	ELECT 3.3uF	20% 100V
C35	1-130-481-00	MYLAR 0.0068uF	5% 50V
C36	1-123-382-00	ELECT 3.3uF	20% 100V
C37	1-124-907-11	ELECT 10uF	20% 50V
C38	1-124-907-11	ELECT 10uF	20% 50V
C39	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
C40	1-124-463-00	ELECT 0.1uF	20% 50V
C41	1-124-927-11	ELECT 4.7uF	20% 100V
C42	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
C43	1-126-176-11	ELECT 220uF	20% 10V
C44	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
C45	1-123-382-00	ELECT 3.3uF	20% 100V
C46	1-161-375-00	CERAMIC 2200P	20% 25V
C48	1-123-382-00	ELECT 3.3uF	20% 100V
C49	1-161-375-00	CERAMIC 2200P	20% 25V
C51	1-124-477-11	ELECT 47uF	20% 25V
C52	1-124-252-00	ELECT 0.33uF	20% 50V
C53	1-163-105-00	CERAMIC CHIP 33PF (AEP, UK, EE)	5% 50V
C54	1-101-005-00	CERAMIC 22000PF (G, IT)	50V
C61	1-163-063-00	CERAMIC CHIP 22000PF	25V
C62	1-163-063-00	CERAMIC CHIP 22000PF	25V
C63	1-163-063-00	CERAMIC CHIP 22000PF	25V
C64	1-163-063-00	CERAMIC CHIP 22000PF	25V
C65	1-163-063-00	CERAMIC CHIP 22000PF (AEP, UK, EE)	25V
C66	1-163-063-00	CERAMIC CHIP 22000PF (AEP, UK, EE)	25V
C67	1-102-120-00	CERAMIC 0.0018uF (AEP, UK, EE)	10% 50V
C68	1-163-011-11	CERAMIC CHIP 1500PF (AEP, UK, EE)	20% 25V

Ref. No.	Part No.	Description	Remark
C69	1-163-063-00	CERAMIC CHIP 22000PF (AEP, UK, EE)	25V
C70	1-163-063-00	CERAMIC CHIP 22000PF (AEP, UK, EE)	25V
C71	1-163-063-00	CERAMIC CHIP 22000PF (AEP, UK, EE)	25V
C72	1-163-063-00	CERAMIC CHIP 22000PF (AEP, UK, EE)	25V
C73	1-163-063-00	CERAMIC CHIP 22000PF (AEP, UK, EE)	25V
C81	1-102-961-00	CERAMIC 27PF	5% 50V
C82	1-102-961-00	CERAMIC 27PF	5% 50V
C83	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
C84	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
C85	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
C86	1-124-477-11	ELECT 47uF	20% 25V
C87	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
C88	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
C101	1-124-925-11	ELECT 2.2uF	20% 100V
C102	1-124-463-00	ELECT 0.1uF	20% 50V
C103	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
C104	1-163-059-00	CERAMIC CHIP 0.01uF	20% 16V
C105	1-124-477-11	ELECT 47uF	20% 25V
C106	1-136-173-00	FILM 0.47uF (AEP, UK, EE)	5% 50V
C107	1-124-463-00	ELECT 0.1uF (AEP, UK, EE)	20% 50V
C108	1-163-063-00	CERAMIC CHIP 22000PF (AEP, UK, EE)	25V
C109	1-102-963-00	CERAMIC 33PF (AEP, UK, EE)	5% 50V
< CARBON MELF >			
CC2	1-249-366-11	CARBON MELF 0 5% (E, EA, AUS, MY, SP, JE)	1/5W
CC3	1-249-366-11	CARBON MELF 0 5% (E, EA, AUS, MY, SP, JE)	1/5W
< FILTER >			
CF1	1-567-389-11	FILTER, CERAMIC	
CF2	1-567-389-11	FILTER, CERAMIC	
CF3	1-567-389-11	FILTER, CERAMIC (G, IT)	
CF21	1-577-075-11	OSCILLATOR, CERAMIC	
< TRANSFORMER >			
CFT21	1-404-853-11	TRANSFORMER, IF (CERAMIC FILTER)	
< CONNECTOR >			
* CNJ1	1-568-273-11	SOCKET, CONNECTOR 7P	

TUNER

Ref. No.	Part No.	Description	Remark
* CNJ3	1-568-308-11	SOCKET, CONNECTOR 4P	
CNJ4	1-568-269-11	SOCKET, CONNECTOR 3P	
< DIODE >			
D21	8-719-987-63	DIODE 1N4148M	
D22	8-719-987-63	DIODE 1N4148M	
D23	8-719-987-63	DIODE 1N4148M	
D24	8-719-987-63	DIODE 1N4148M	
D61	8-719-987-63	DIODE 1N4148M (AEP, UK, EE)	
< FRONT END >			
FE1	1-463-862-21	FRONT END, FM (AEP, UK, E, EA, AUS, MY, SP, JE)	
FE1	1-463-857-11	FRONT END (FM) (G, IT)	
FE1	1-465-560-11	FRONT END (FM 3 GANG) (EE)	
FE61	1-236-462-11	ENCAPSULATED COMPONENT (AEP, UK, G, IT, EE)	
FE61	1-236-461-11	ENCAPSULATED COMPONENT (E, EA, AUS, MY, SP, JE)	
FE62	1-236-463-11	ENCAPSULATED COMPONENT (AEP, UK, EE)	
< IC >			
IC21	8-759-821-45	IC LA1851N	
IC81	8-759-820-91	IC LC7218	
< COIL >			
L1	1-410-645-31	INDUCTOR 100uH	
L2	1-410-645-31	INDUCTOR 100uH (G, IT)	
L21	1-407-500-00	INDUCTOR 4.7mH (AEP, UK, G, IT, EE)	
L21	1-410-171-11	INDUCTOR 1mH (E, EA, AUS, MY, SP, JE)	
L61	1-410-525-11	INDUCTOR 220uH (AEP, UK, EE)	
< FILTER >			
LPF21	1-235-164-00	FILTER, LOW PASS	
LPF22	1-235-164-00	FILTER, LOW PASS	
< TRANSISTOR >			
Q1	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q2	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q3	8-729-230-99	TRANSISTOR 2SC2669-OY (G, IT)	
Q4	8-729-230-99	TRANSISTOR 2SC2669-OY (G, IT)	
Q21	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q22	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q23	8-729-900-61	TRANSISTOR DTA114ES	
Q24	8-729-900-80	TRANSISTOR DTC114ES	
Q26	8-729-900-80	TRANSISTOR DTC114ES	
Q27	8-729-620-05	TRANSISTOR 2SC2603-EF (AEP, UK, G, IT, EE)	
Q27	8-729-119-78	TRANSISTOR 2SC2785-HFE (E, EA, AUS, MY, SP, JE)	
Q28	8-729-620-05	TRANSISTOR 2SC2603-EF (AEP, UK, G, IT, EE)	

Ref. No.	Part No.	Description	Remark
Q28	8-729-119-78	TRANSISTOR 2SC2785-HFE (E, EA, AUS, MY, SP, JE)	
Q61	8-729-900-80	TRANSISTOR DTC114ES (AEP, UK, EE)	
Q62	8-729-900-80	TRANSISTOR DTC114ES (AEP, UK, EE)	
Q63	8-729-900-80	TRANSISTOR DTC114ES (AEP, UK, EE)	
Q64	8-729-620-05	TRANSISTOR 2SC2603-EF (AEP, UK, EE)	
Q65	8-729-119-76	TRANSISTOR 2SA1175-HFE (AEP, UK, EE)	
Q66	8-729-900-80	TRANSISTOR DTC114ES (AEP, UK, EE)	
Q81	8-729-900-61	TRANSISTOR DTA114ES	
Q82	8-729-900-80	TRANSISTOR DTC114ES	
Q83	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q84	8-729-230-93	TRANSISTOR 2SC3113-AB	
Q85	8-729-202-67	TRANSISTOR 2SK246-GR3 (AEP, UK, EE)	
Q86	8-729-230-93	TRANSISTOR 2SC3113-AB (AEP, UK, EE)	
< RESISTOR >			
△R1	1-249-401-11	CARBON 47 5% 1/4W F (EXCEPT G, IT)	
△R1	1-249-397-11	CARBON 22 5% 1/4W F (G, IT)	
R3	1-249-329-11	CARBON MELF 330 5% 1/8W	
R4	1-249-329-11	CARBON MELF 330 5% 1/8W	
R5	1-249-329-11	CARBON MELF 330 5% 1/8W (AEP, UK, E, EE, EA, AUS, MY, SP, JE)	
R6	1-249-350-11	CARBON MELF 18K 5% 1/8W	
R7	1-249-329-11	CARBON MELF 330 5% 1/8W	
R8	1-249-332-11	CARBON MELF 560 5% 1/8W	
R9	1-249-352-11	CARBON MELF 27K 5% 1/8W	
R10	1-249-329-11	CARBON MELF 330 5% 1/8W (G, IT)	
R11	1-249-350-11	CARBON MELF 18K 5% 1/8W (G, IT)	
R12	1-249-329-11	CARBON MELF 330 5% 1/8W (G, IT)	
R13	1-249-334-11	CARBON MELF 820 5% 1/8W (G, IT)	
R14	1-249-352-11	CARBON MELF 27K 5% 1/8W (G, IT)	
R15	1-249-347-11	CARBON MELF 10K 5% 1/8W (G, IT)	
R16	1-249-343-11	CARBON MELF 4.7K 5% 1/8W (G, IT)	
△R21	1-249-404-00	CARBON 82 5% 1/4W F	
R22	1-249-430-11	CARBON 12K 5% 1/4W (EXCEPT G, IT)	
R22	1-249-431-11	CARBON 15K 5% 1/4W (G, IT)	
R23	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R24	1-249-353-11	CARBON MELF 33K 5% 1/8W	
R25	1-249-346-11	CARBON MELF 8.2K 5% 1/8W	
R27	1-249-432-11	CARBON 18K 5% 1/4W	
R28	1-249-423-11	CARBON 3.3K 5% 1/4W F	
R29	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R31	1-249-331-11	CARBON MELF 470 5% 1/8W	
R32	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R33	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R34	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R35	1-249-355-11	CARBON MELF 47K 5% 1/8W	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

TUNER

Ref. No.	Part No.	Description	Remark
R37	1-249-359-11	CARBON MELF 100K 5%	1/8W
R38	1-249-363-11	CARBON MELF 220K 5%	1/8W
R39	1-249-339-11	CARBON MELF 2.2K 5%	1/8W
R40	1-249-338-11	CARBON MELF 1.8K 5%	1/8W
R41	1-249-344-11	CARBON MELF 5.6K 5%	1/8W
R42	1-249-359-11	CARBON MELF 100K 5%	1/8W
R43	1-249-363-11	CARBON MELF 220K 5%	1/8W
R44	1-249-339-11	CARBON MELF 2.2K 5%	1/8W
R45	1-249-338-11	CARBON MELF 1.8K 5%	1/8W
R46	1-249-344-11	CARBON MELF 5.6K 5%	1/8W
△R47	1-249-409-91	CARBON 220 5%	1/4W F
R48	1-249-359-11	CARBON MELF 100K 5%	1/8W
R49	1-249-359-11	CARBON MELF 100K 5%	1/8W
R61	1-249-359-11	CARBON MELF 100K 5%	1/8W
R62	1-249-355-11	CARBON MELF 47K 5%	1/8W
R63	1-249-315-11	CARBON MELF (E, EA, AUS, MY, SP, JE) 22 5%	1/8W
R64	1-249-351-11	CARBON MELF (AEP, UK, EE) 22K 5%	1/8W
R65	1-249-355-11	CARBON MELF (AEP, UK, EE) 47K 5%	1/8W
R66	1-215-493-00	METAL (AEP, UK, EE) 1M 5%	1/4W
R67	1-249-359-11	CARBON MELF (AEP, UK, EE) 100K 5%	1/8W
R68	1-249-352-11	CARBON MELF (AEP, UK, EE) 27K 5%	1/8W
R69	1-249-351-11	CARBON MELF (AEP, UK, EE) 22K 5%	1/8W
R70	1-249-331-11	CARBON MELF (AEP, UK, EE) 470 5%	1/8W
R71	1-249-339-11	CARBON MELF (AEP, UK, EE) 2.2K 5%	1/8W
R72	1-249-351-11	CARBON MELF (AEP, UK, EE) 22K 5%	1/8W
R73	1-249-347-11	CARBON MELF (AEP, UK, EE) 10K 5%	1/8W
R74	1-249-347-11	CARBON MELF (AEP, UK, EE) 10K 5%	1/8W
R75	1-249-343-11	CARBON MELF (AEP, UK, EE) 4.7K 5%	1/8W
R81	1-249-335-11	CARBON MELF 1K 5%	1/8W
R82	1-249-335-11	CARBON MELF 1K 5%	1/8W
R83	1-249-335-11	CARBON MELF 1K 5%	1/8W
R84	1-249-335-11	CARBON MELF 1K 5%	1/8W
R85	1-249-347-11	CARBON MELF 10K 5%	1/8W
R86	1-249-335-11	CARBON MELF 1K 5%	1/8W
R87	1-249-347-11	CARBON MELF 10K 5%	1/8W
R88	1-249-343-11	CARBON MELF 4.7K 5%	1/8W
R89	1-249-335-11	CARBON MELF 1K 5%	1/8W

Ref. No.	Part No.	Description	Remark
R90	1-249-343-11	CARBON MELF (AEP, UK, EE, G, IT) 4.7K 5%	1/8W
R90	1-249-347-11	CARBON MELF (E, EA, AUS, MY, SP, JE) 10K 5%	1/8W
R91	1-249-335-11	CARBON MELF 1K 5%	1/8W
△R92	1-249-401-11	CARBON 47 5%	1/4W F
R101	1-249-341-11	CARBON MELF 3.3K 5%	1/8W
R102	1-249-332-11	CARBON MELF 560 5%	1/8W
R103	1-249-335-11	CARBON MELF 1K 5%	1/8W
R104	1-249-328-11	CARBON MELF 270 5%	1/8W
R105	1-249-343-11	CARBON MELF 4.7K 5%	1/8W
R106	1-249-339-11	CARBON MELF 2.2K 5%	1/8W
R107	1-249-343-11	CARBON MELF 4.7K 5%	1/8W
R108	1-249-323-11	CARBON MELF 100 5%	1/8W
R109	1-249-343-11	CARBON MELF (AEP, UK, E, EE, EA, AUS, MY, SP, JE) 4.7K 5%	1/8W
△R110	1-249-405-11	CARBON 100 5%	1/4W F
R111	1-249-341-11	CARBON MELF (AEP, UK, EE) 3.3K 5%	1/8W
R112	1-249-332-11	CARBON MELF (AEP, UK, EE) 560 5%	1/8W
R113	1-249-335-11	CARBON MELF (AEP, UK, EE) 1K 5%	1/8W
R114	1-249-328-11	CARBON MELF (AEP, UK, EE) 270 5%	1/8W
R115	1-249-351-11	CARBON MELF (AEP, UK, EE) 22K 5%	1/8W
R116	1-249-339-11	CARBON MELF (AEP, UK, EE) 2.2K 5%	1/8W
R117	1-249-343-11	CARBON MELF (AEP, UK, EE) 4.7K 5%	1/8W
R118	1-249-323-11	CARBON MELF (AEP, UK, EE) 100 5%	1/8W
< VARIABLE RESISTOR >			
RV21	1-241-628-11	RES, ADJ, CARBON 2.2K (EXCEPT G, IT)	
RV21	1-241-629-11	RES, ADJ, CARBON 4.7K (G, IT)	
RV22	1-241-631-11	RES, ADJ, CARBON 22K	
RV24	1-241-631-11	RES, ADJ, CARBON 22K (EXCEPT G, IT)	
RV24	1-238-019-11	RES, ADJ, CARBON 47K (G, IT)	
< TRANSFORMER >			
T21	1-404-807-11	TRANSFORMER, DISCRIMINATOR	
T23	1-236-465-11	ENCAPSULATED COMPONENT (G, IT)	
< TERMINAL >			
* TM1	1-537-138-31	TERMINAL BOARD (ANTENNA) (AEP, UK, G, IT, EE)	
TM1	1-537-238-21	TERMINAL BOARD (ANTENNA) (E, EA, AUS, MY, SP, JE)	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

TUNER

Ref. No.	Part No.	Description	Remark
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< TEST PIN >

* TP1 1-560-060-00 PIN, CONNECTOR 2P

< VIBRATOR >

XT81 1-577-126-21 VIBRATOR, CRYSTAL (7.2MHz)

MISCELLANEOUS

△6 1-575-666-11 WIRE, FLAT TYPE (11 CORE)
△20 1-575-651-11 CORD, POWER (AEP, EE, EA, MY, SP)
△20 1-575-651-21 CORD, POWER (G, IT)
△21 1-690-608-11 CORD, POWER (AUS)
△22 1-696-907-11 CORD, POWER (UK)

△23 1-575-653-11 CORD, POWER (E, JE)
△24 1-569-007-11 ADAPTER, CONVERSION 2P (E3, JE)
△25 1-569-008-11 ADAPTER, CONVERSION 2P (EA, MY, SP)
△CNJ801 1-251-078-11 OUTLET, AC. (AUS)
△CNJ801 1-526-751-00 OUTLET, AC (UK)

△CNJ801 1-526-794-11 OUTLET, AC (AEP, G, IT, EE, EA, MY, SP)
△CNJ802 1-251-078-11 OUTLET, AC. (AUS)
△CNJ802 1-526-751-00 OUTLET, AC (UK)
△CNJ802 1-526-794-11 OUTLET, AC (AEP, G, IT, EE, EA, MY, SP)
△F801 1-532-286-00 FUSE 2. 5A (UK, G, IT)

△F801 1-532-299-00 FUSE 5A (E, EA, AUS, MY, SP, JE)
△F801 1-576-229-31 FUSE (H. B. C.) 2. 5A (AEP, EE)
△PT801 1-449-978-11 TRANSFORMER, POWER (E, EA, AUS, MY, SP, JE)
△PT801 1-449-979-11 TRANSFORMER, POWER (AEP, UK, G, IT, EE)

HARDWARE LIST

#1 7-685-646-79 SCREW +BVTP 3X8 TYPE2 N-S
#2 7-685-647-79 SCREW +BVTP 3X10 TYPE2 N-S
#3 7-685-134-19 SCREW +BTP 2. 6X8 TYPE2 N-S
#4 7-621-849-00 SCREW (BV/RING)
#5 7-685-645-79 SCREW +BVTP 3X6 TYPE2 N-S (UK)

The components identified by
mark △ or dotted line with mark.
△ are critical for safety.
Replace only with part number
specified.